

The Golden Hands Encyclopedia of CRAFTS

The complete guide to
traditional and modern home crafts

Volume 24

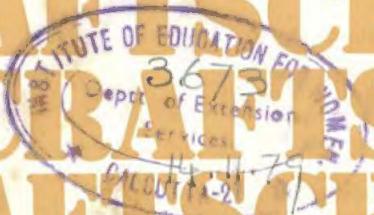


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Golden Hands Encyclopedia of

CRAFTS



Marshall Cavendish

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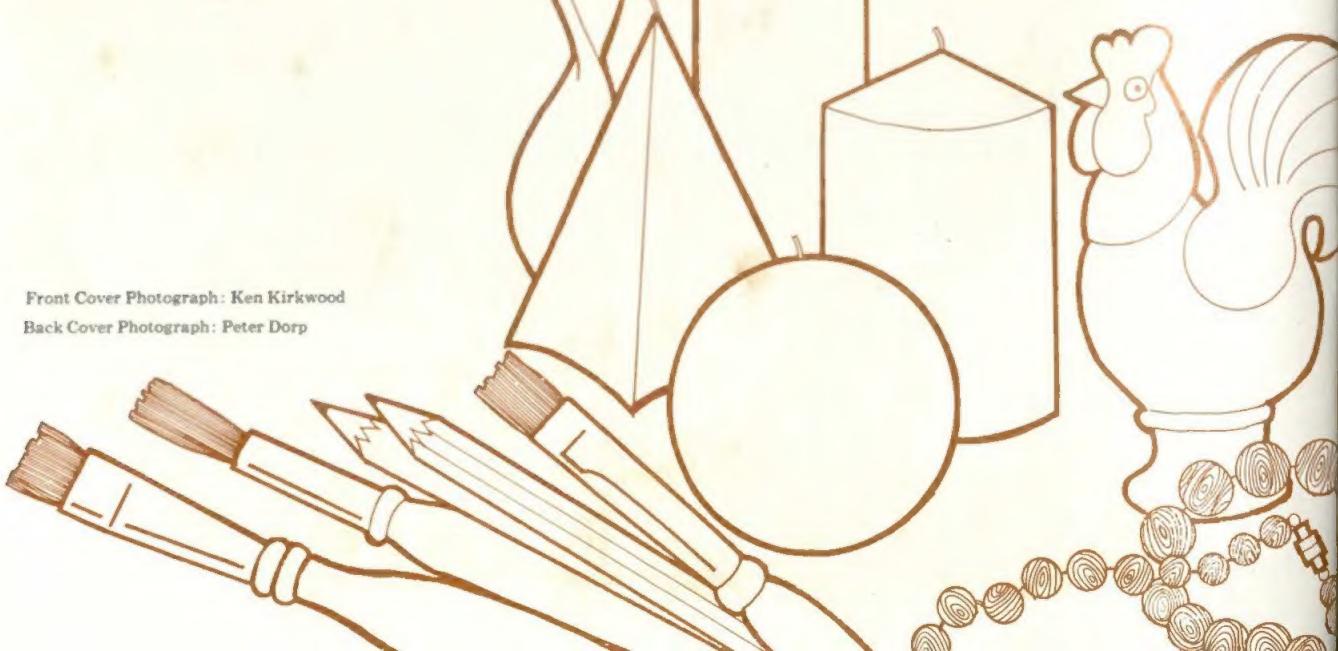
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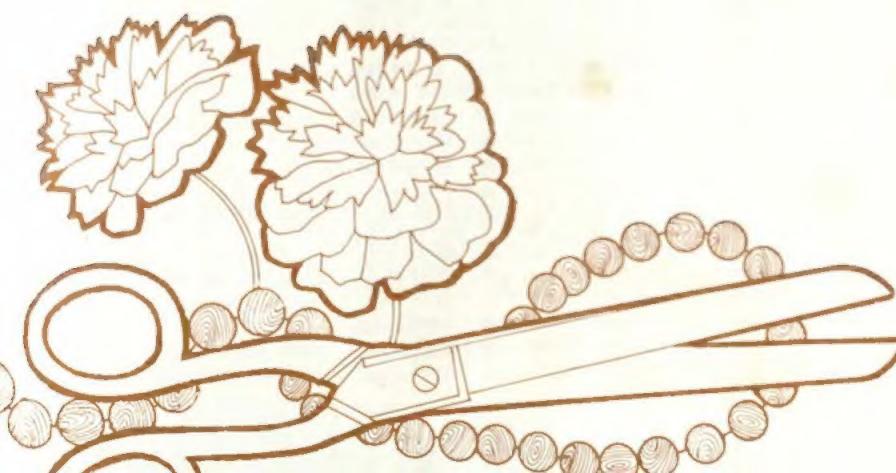
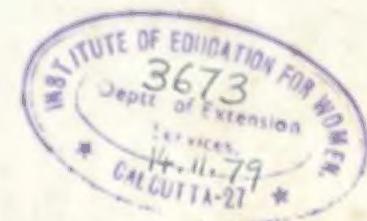
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United Kingdom

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with any enquiries to
the suppliers below

Clay 55. Cold clay and other materials at The Fulham Pottery Ltd, 210 New King's Rd, London SW6 4NY or at Southern Supplies Centre, 42 Morley Rd, Tonbridge, Kent. Materials also at Harrison Mayer Ltd, Meir, Stoke-on-Trent, Staffs ST3 7PX; Ferro (Great Britain) Ltd, Wom Bourne, Wolverhampton WV5 8DA who also supply overseas; Wengers Ltd, Garner St, Etruria, Stoke-on-Trent, Staffs ST4 7BQ. Mail van, wooden blocks and beads at Galt Toys, 30 Great Marlborough St, London W1V 2BT. Kids T-shirts from a selection at Dickins & Jones, Regent St, London W1A 1DB.

Clay 56. Materials at builders merchants.

Clay 57. A wide range of clay requisites available at Clay-glaze, Kings Yard Pottery, Talbot Rd, Rickmansworth, Herts. Clay tools at H. W. Anger & Son Ltd, 1 Mill Lane, Polstead, Colchester CO6 5AB. (Both addresses also offer mail order service).

Home herbalist 9. Herbs and spices at Culpeper House Ltd, 21 Bruton St, London W1 for personal shoppers and Culpeper Ltd, Hadstock Rd, Linton, Cambridge CB1 6NJ for mail order service.

Wax 8. Candlemaking equipment at Candle Makers Supplies, 28 Blythe Rd, London W14. Landscape candles from Footpath Candles and Craft Shop, 1 Walters Yard, Bromley, Kent.

Bobbin lace 3. Lace-making requisites at E Braggins & Sons Ltd, 26 Silver St, Bedford MK40 1SX (also mail order); Mace and Nairn, 89 Crane St, Salisbury, Wilts SP1 2PY and The Needlewoman Shop, 146 Regent St, London W1 who also offer mail order service. Hand-made wooden bobbins by mail order from Nottinghamshire County Council, Social Services Department, Work Project Centre, 108A Mansfield Rd, Notts. Child's dress from a selection at Dickins & Jones (see under Clay).

Bobbin lace 4. Lace-making requisites at E Braggins & Sons Ltd, 26 Silver St, Bedford MK40 1SX; Mace and Nairn, 89 Crane St, Salisbury, Wilts SP1 2PY and The Needlewoman Shop, 146 Regent St, London W1 who also offer mail order service. Hand-made wooden bobbins by mail order from Nottinghamshire County Council, Social Services Department, Work Project Centre, 108A Mansfield Rd, Notts. Blouse from a selection at Laura Ashley, 9 Harriet St, London SW1. Shoes by Rayne from a selection at Harvey Nichols, Knightsbridge, London W1. Men's shoes by Mezlan at Joe and Ada Bloggs, 187 Wardour St, London W1V 6DD.

Upholstery 15. Materials at Grant Baxell, 195A Upper Richmond Rd, London SW15 who also offer mail order service.

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Basketry 26. Adult's and child's dungarees and T-shirts from a selection at Meenys, 241 King's Rd, London SW3.

Basketry 28. Glass jug by Dartington at Dickins & Jones, Regent St, London W1. Plants at Selwyn Davidson, 31 Berwick St, London W1.

Paint 40. Scene paint, size and powdered whiting at A Leete & Co, 129 London Rd, London SE1 and Brodie & Middleton, 79 Long Acre, London WC1. Canvas, gauzes and other materials at J D McDougall, 64 Station Rd, London E7.

Weaving 32. Weaving looms and accessories at Handweavers Studio & Gallery, 29 Haroldstone Rd, London E17 7AN.

Weaving 33. Looms by mail

order from Frank Herring & Sons, 27 High West St, Dorchester, Dorset; Dryad Ltd PO Box 38, Northgates, Leicester LE1 9BU; Harris Looms Ltd, North Grove Rd, Hawkhurst, Kent TN18 4AP and Handweavers Studio & Gallery Ltd, 29 Haroldstone Road, London E17 7AN (for mail order and personal shoppers). Yarn from William Hall & Co (Monsall) Ltd, 177 Stanley Rd, Cheadle Hulme, Cheshire FK8 6RF and Handweavers Studio & Gallery Ltd. Skirt, blouse and beads at Mexicana, 89 Lower Sloane St, London SW1.

Weaving 34. Looms and accessories at Handweavers Studio & Gallery, 29 Haroldstone Rd, London E17 7AN who also offer mail order service. Dress at Laura Ashley, 9 Harriet St, London SW1.

Shellcraft 5. Shells at Eaton's Shell Shop, 16 Manette St, London W1V 5LB.

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Carpentry 32. Materials at DIY stores.

Leather 17. Gloving leathers and patterns at Barrow Hepburn Leather Store, Kensington High St, London W8 and John P. Milner, 67 Queen St, Hitchin, Herts SG4 9TU (both offer mail order service) (Barrow Hepburn also offer tuition). Handbag, scarves, umbrella, ladies tan gloves and white evening gloves at Harrods, Knightsbridge, London SW1X 7XL. Golf club, golf ball, shooting stick and all other gloves from Moss Bros, Bedford St, London WC2. Motorbike gloves at Lewis Leathers, 124 Gt Portland St, London W1.

Beadwork 13. Beads at Hobby Horse, 15 Langton St, London SW10 and Ells & Farrier, 5 Princes St, London W1. (Both addresses also offer mail order service).

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Printing 26. Prints at Thumt Gallery, 20 D'Arblay St, London W1V 3FN.

Wax 7. All equipment at Candle Makers Supplies, 28 Blythe Rd, London W14. Aquarium at The Neal Street Shop, Neal St, London WC2.

Metal 32. Wood samples by mail order from Timber Research and Development Association, High Wycombe, Bucks HP14 4ND and Roy Child, The Old Hyde, Little Yeldham, Halstead, Essex CO9 4QT. Copper or brass at J Smith & Sons Ltd, 42 St John's Sq, London EC1P 1ER. Precious metals at Blundell & Sons Ltd, 199 Wardour St, London W1V 4JN.

Sewing 30. Ciré for rain ponchos from a selection at John Lewis Oxford St, London W1V 4JN.

Metrication

In this volume you will find two systems of measurement. The first set of figures refers to the metric system and the Imperial figures follow in brackets. Whenever possible, a commonsense approach has been adopted and both sets of measurements have been worked out in round numbers. **BUT BEWARE!** This means that metric and the Imperial figures are *not* equivalent so make sure you only work with one or other set of figures.

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Creative ideas 93

Patchwork table

Transform a humdrum table into an eye-catching item with varnished fabric patchwork. Although time consuming, this idea produces a cloth 'finish' which is made hard wearing by many coats of varnish.

For the best results select a simple, straight-sided piece of furniture, such as a modern, unpainted table. To prepare an old table strip off the old surface first. Use a simple patchwork shape such as the hexagon before trying more elaborate designs and make sure that the template and table size are in keeping.

When selecting fabrics stick to 100% cotton as it cuts easily and absorbs both adhesive and varnish. Particularly fine cotton can be backed with a light-weight iron-on interfacing, which will also prevent fraying. (Pale fabrics tend to turn yellow when they are varnished.)

Ten different fabrics were used for this table, which measures 43cm x 43cm x 34cm (17" x 17" x 13½").

You will need:

Table.

Wood primer and undercoat in dominant fabric colour. Adhesive such as Evo-stik woodworking adhesive. 5cm (2") template.

Selection of fabrics.

About 1 litre (1½ pints) of gloss polyurethane varnish. Sharp, soft pencil, scalpel, ruler, newspaper, scissors. Two 2.5cm (1") brushes. White spirit, aluminium foil, four wood blocks.

Light-weight iron-on interfacing (optional). Covering surrounding surfaces with newspaper, stand the table on wood blocks to prevent it from sticking to newspaper during painting and varnishing.

Prime and paint table with undercoat. Iron fabrics and interface, if necessary. Place template on wrong side of fabric.



Geoffrey Frost

Trace around it in pencil, making a clear, accurate line. Cut out hexagon, keeping strictly to pencil lines. Repeat until you have sufficient hexagons—the table here required thirty-two hexagons in each fabric.

Draw two lines diagonally from corners of table top. Where lines cross, centre first hexagon. Stick in place using a brush saturated with adhesive which has been slightly thinned with water. (An empty margarine container makes a good mixing palette.) Brush a coat of adhesive over the hexagon, but be careful not to displace it.

Working out from centre in all directions, apply more hexagons by same method. Be careful not to overlap

fabric edges, as this will cause hard ridges when dry. At table edges simply stick hexagon in place on the top, wait until this section is slightly dry, then neatly fold rest of hexagon over table edge and stick in place. If side section is very small, cut off fabric at table edge with a scalpel and ruler and stick it on separately.

Continue to apply patchwork, working down one leg at a time. At the corners you may find it necessary to cut a bit off the hexagon for a neat fit. Because of their small dimensions you may also need to do some piecing on the legs.

Leave patchwork table to dry thoroughly for about a week.

Apply first coat of varnish

Patience is needed to create a successful, fabric patchwork table.

with brush. Leaving 24 hours between each, apply at least 25 coats of varnish. Between applications check the table surface for hairs or specks of dust. The first ten coats of varnish will probably sink into the fabric but after these you should notice a protective coat forming.

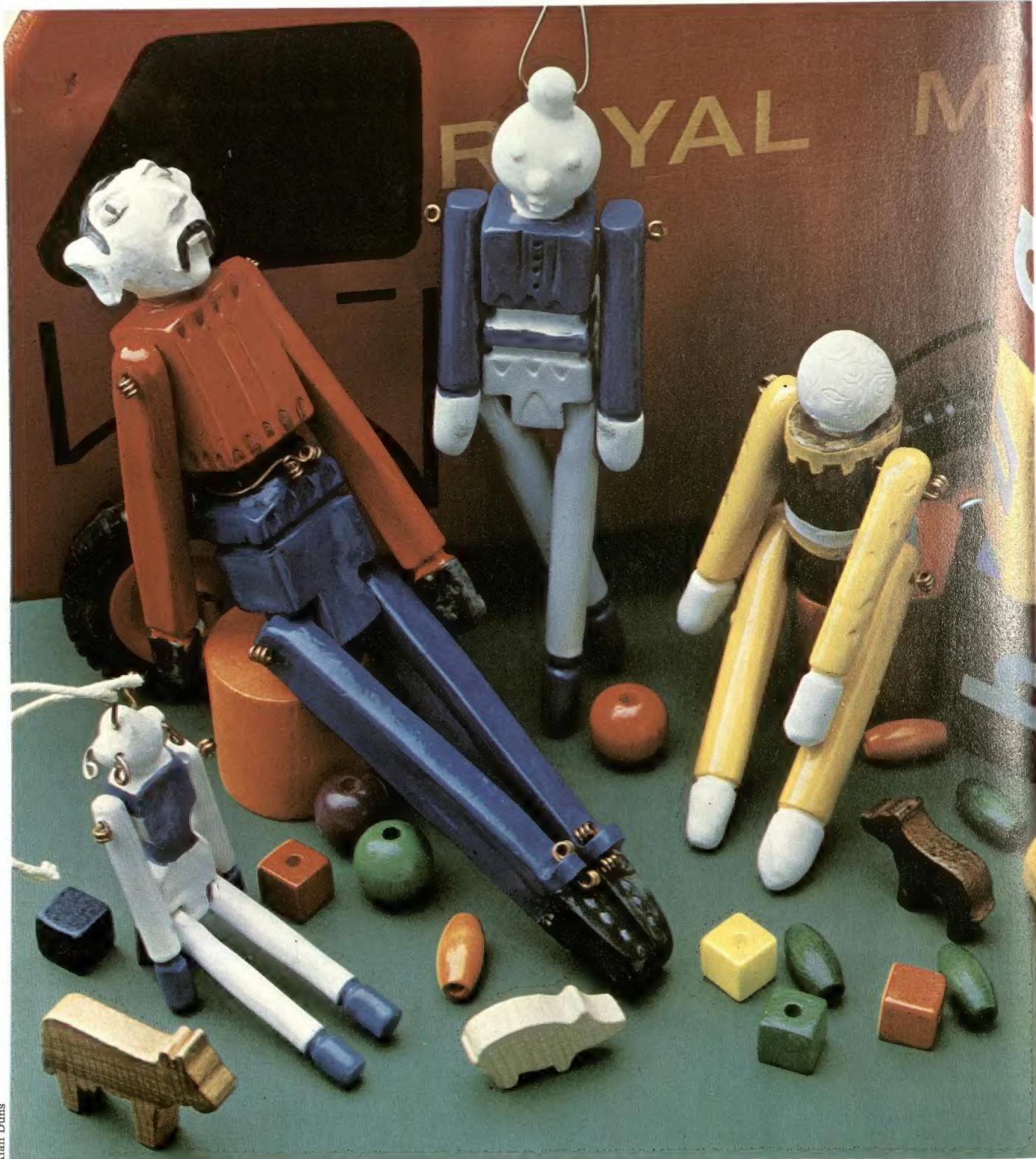
Between applications dip the brush in white spirit and seal in aluminium foil to prevent it from stiffening. During last few applications you may find it helpful to lay the table on different sides, so that the varnish does not run down the legs. Designed by Lorraine Johnson.

Miniature dolls and puppets

Clay 55



In Clay chapter 48, page 2102, two small clay figures are incorporated into the design of a necklace. Using very similar techniques, you can make clay dolls and puppets; you can even design and paint them to form particular characters, such as the dolls illustrated below. The chief differences between dolls and puppets are that the puppets are strung and more fully jointed.



All dolls and puppets shown were made from potters' clay, but cold self-hardening clay works just as well and the same instructions apply. However, if you do use self-hardening clay, keep a damp cloth nearby and wipe your hands frequently because the clay tends to set on your fingers and make working difficult.

To make the red and blue soldier, two small unpainted doll 'charms' and one large and one small puppet

You will need:

500gm (1 lb) clay.

Ceramic tile or plate.

Wooden toothpicks.

Small penknife.

Paintbrush and jar of water.

25cm (10") of copper wire .45mm (gauge 25-3).

15cm (6") of copper wire 1.8mm (gauge 13-15).

Piece of 2.5cm (1") wide wooden trim, 17.5cm (7") long.

Piece of half-round beading, 15cm (6") long.

Round-nosed pliers.

12 small screw-eyes.

Airfix enamel gloss paints in colours of your choice.

Ball of strong, fine cotton string.

Soldier doll

The soldier's body is 7cm (2 1/4") long by 2cm (1/2") wide; his arms are 8.6cm (3 1/4") long and his legs 10cm (3 3/4") long. If you decide to make the body larger or smaller, be sure to make the arms and legs in proportion—arms longer than body and legs longer than arms.

□ Form a block of clay 7cm (2 1/4") long by 2cm (1/2") wide.

□ Working on a ceramic tile or plate, tap the block of clay on each side until it is smooth and the right size.

□ With the handle of the paintbrush press in the waist area.

□ Using the wooden toothpick, press a line all around the body just below the waist. This indicates the top of the trousers.

□ With the knife, press the surface decoration on to the body.

Surface decoration is a matter of choice and, in this case, has primarily been used to give a textured effect.

□ Cut out the areas where the legs are to be attached and make the holes through the shoulders and the base of the block for the legs, exactly as described in Clay chapter 48.

□ Roll out a small ball of clay for the head.

□ Model simple features, either by attaching tiny particles of clay to the head or by pinching out a nose and ears from the head itself.

Brilliantly coloured clay dolls can be used for play or for decoration. They are painted with gloss paints.



Jerry Tubby

These unpainted miniatures have the mysterious quality of amulets.

Small unpainted dolls

□ Roll out a piece of clay 2.5cm (1") long and a smaller piece 1.2cm (1/2") long.

□ Dampen and roughen one end of the smaller piece and attach it to the base of the larger piece.

□ Use the toothpick to make leg holes through the smaller piece and a hole through the top of the large piece for the arms.

□ Roll out a ball of clay for the head, dampen and roughen the base of the ball and attach to the body.

□ Make the arms 5cm (2") long and the thickness of a pencil. Make the legs 6.2cm (2 1/2") long and the same thickness.

□ With a toothpick, make holes through the tops of the arms and press the wrist line.

□ Flatten the tops of the legs slightly by pressing on the edge of the tile.

□ Press out the ankle lines and make the holes through the tops of the legs.

□ When the pieces have been fired—or allowed to dry if you are using cold clay—attach the arms and legs with the finer gauge wire, or string, in the usual way.

These small dolls can be painted or left plain; they can even be dressed in felt clothes and wire jewelry.

Small puppet

The body of the small puppet measures 5.6cm (2 1/4") long by 2cm (1") thick. The upper piece of each arm is 3.1cm (1 1/4") long and the lower 4cm (1 1/2"). The upper part of each leg is 5cm (2") long and the lower 5.6cm (2 1/4") long.

Make the head and body of the puppet in the usual way, and attach the head.

Fix a small ball of clay to the top of the head and pierce a hole through it for the head string.

Note: all holes must be large enough to admit the cotton string.

Fix another small ball of clay just below the back of the waist and pierce



1

a hole through this, also.

Make the arms and legs in two pieces to the measurements given above.

Roll out four small balls of clay, dampen and roughen them and attach one to the bottom of each upper arm piece and one to the bottom of each upper leg piece. These form the elbow and knee joints (fig.1).

Pierce a hole through each ball joint.

Make holes in the body for the arms and legs. Make holes in the tops of arms and legs, as usual, and also through the 'hands'.

Fire, or dry, and paint the pieces.

Stringing small puppet

Screw in a small screw-eye 1.2cm (1/2") in from each end on the 17.5cm (7") piece of wooden trim. Screw a third screw-eye exactly between the other two.

To the flat side of the half-round beading, 1.2cm (1/2") in from each end, screw in two more screw-eyes.

To the centre of the rounded side of the beading, attach one screw-eye.

Open one screw-eye at the end of the trim bar and link it into the centre of the small bar. Close the screw-eye again with pliers.

Tie the two parts of the arms together at the elbow. Cut off the extra string.

Pass a string through the top of one arm, through the shoulders and

through the top of the other arm. Tie a double knot on the outside of each arm. Cut off excess string.

Do the same with the top of the leg joints.

Tie a knot in the end of a piece of string, slip the free end through the back hole of the puppet, and leave enough string to attach to the control piece.

Pass a knotted string through the hole in the top of the head, again leaving extra string.

Using strong cotton string and reef knots, tie each upper leg to each lower leg (fig.2).

Do not tie the string so tightly that the joints cannot move freely. Leave enough string to attach to the wooden control piece, about 25cm (10").



Nelson Hargreaves

2



3



4

Large puppet

The body of the large puppet opposite is 8.6cm (3 1/4") by 2.5cm (1") thick—width 4.5cm (1 1/4"). The upper arms are 5cm (2") long and the lower 5.6cm (2 1/4") long. The upper legs are 6cm (2") long and the lower 6cm (2") long.

Make this puppet exactly as the small one, but make all the holes large enough to take the thicker wire as well as string, to bear the extra weight.

Stringing large puppet

The large puppet is strung in the same way as the small one, except that a piece of wire should be passed through shoulder and leg joints and the ends turned over with pliers. The arms and legs are then attached, with more wire, to the looped ends of this wire. Wire is used because the extra weight of the large puppet would cause strings through these areas to wear too

quickly. The string through the puppet's head should also be used double for additional strength.

The puppeteer's art can be practised with omnipotence using clay puppets whose characters you can mould yourself and whose every action you can then manipulate. All dolls and puppets illustrated in this chapter are by Patricia de Menezes.



Ladder and Little Torchon Fan patterns



Lace hairband in the Ladder pattern was worked by Rachel Woodward, aged 11.

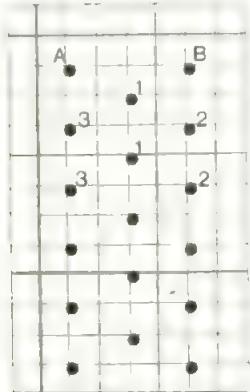
In Bobbin lace chapter 2, page 25%, an introduction is given to the basic stitches for working bobbin lace. Once you have practised these sufficiently to work them with confidence, you are ready to start your first pattern.

This chapter gives instructions on two of the simplest patterns—the Ladder and Little Torchon Fan. You will need the same basic materials for both patterns as for the basic stitches (see Bobbin lace chapters 1 and 2, pages 2506 and 2526 respectively). 12 bobbins are required for the Ladder and 16 for the Little Torchon Fan.

The Ladder

| Wind six pairs of bobbins using a fairly thick thread such as DMC coton perlé No.8 or Anchor pearl cotton No.8.

- Prepare the pricking card as for the basic stitches (see Bobbin lace chapter 2) using graph paper with 8 squares per 2.5cm (1") and the pattern given in fig.1.
- Following fig.1, put a pin in holes A and B.



1. Pricking chart for Ladder pattern.

Hang three pairs of bobbins from pin A and three pairs from pin B so that each bobbin of each pair lies next to its partner.

Pin-hole 1

Take the two centre pairs—ie the right-hand pair from pin A and the left-hand pair from pin B—and work them together in cloth stitch and twist (hereinafter cst).

Put a pin in pin-hole 1 between these two central pairs, and work another cst with the same two central pairs.

Pin-hole 2

Using the right-hand pair from pin 1, work cst through each of the two pairs from pin B in turn.

Put a pin in pin-hole 2 between the second and third pairs from the right.

Leave the pair on the extreme right aside, work first with the other two pairs.
Pin hole?

Pin-hole 3

Now take the left-hand pair from pin 1 and work cst through each of the

two remaining pairs from pin A in turn.

Put a pin in pin hole 3 between the second and third pairs from the left.

Leave the pair on the extreme left and work cst with the other two pairs. These last moves (with pairs from pin A) catch those on the right-hand side (with pairs from pin B) to make a completely symmetrical pattern.

Use three pins—1, 2 and 3—complete a pattern repeat. Continue working the pattern in the same order until the desired length of pattern is reached.

Pins 1 and 3 are called 'foot pins'. The slight edge formed outside these pins is called the 'foot edge'.

This pattern looks most attractive when the lace is threaded with a narrow velvet ribbon for use as a hairband or bracelet, or even to trim a dress.

If you wish to make a finer lace, reduce the size of the graph paper and the thickness of the thread. For example, use graph paper with 10 squares per 2.5 cm (1") and a finer thread such as 10/4C coton perlé or Anchor pearl cotton No.12.

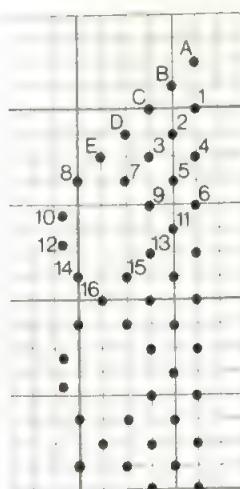
Little Torchon Fan

Wind eight pairs of bobbins using pearl cotton No.8.

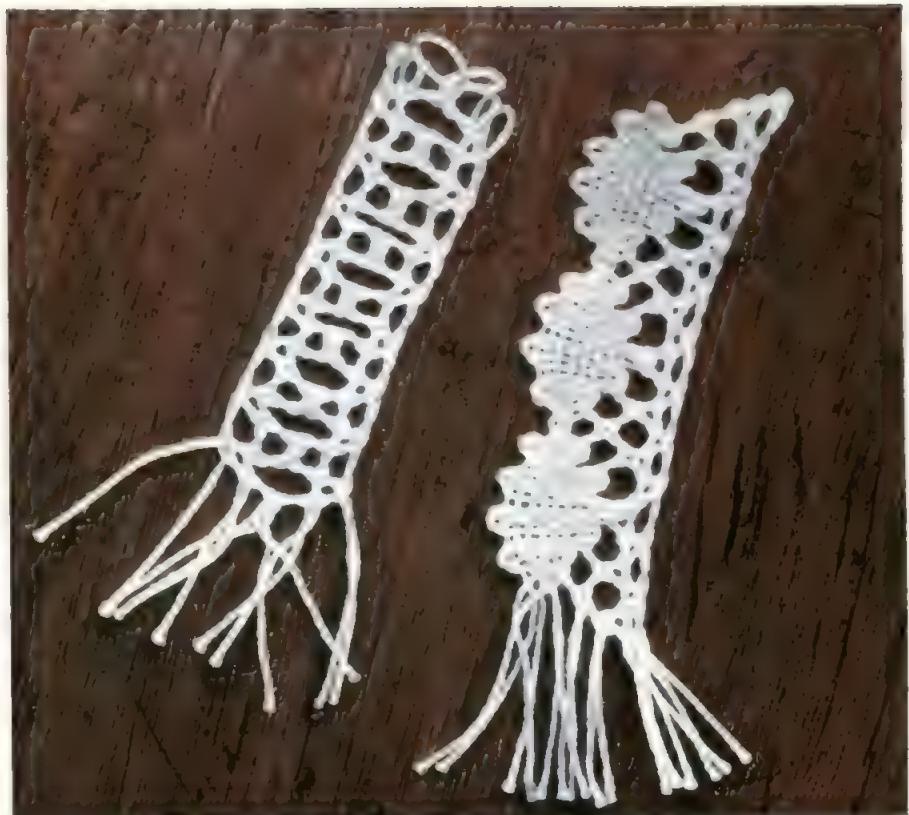
Prepare the pricking card using graph paper with 8 squares per 2.5 cm (1") and the pattern given in fig.2. As this pattern is more complicated to follow than the previous one, it is helpful to mark pin-hole numbers on the pricking card for quick and easy reference. Use a fine felt-tipped pen or ink rather than a ballpoint pen or a pencil as these will soil the lace.

Following fig.2, insert pins in pin-holes A, B, C, D and E.

Hang three pairs of bobbins from pin A, one pair from pin B, one from pin C, two from pin D and one from pin E. Following fig.2, work pattern as follows:



2. Pricking chart, Little Torchon Fan.



Alan Dunn

Pin-hole 1

The pin in pin-hole 1 is a foot pin.

With the third pair from the right (from A), work cst with each of the two pairs to the right of it in turn.

Insert a pin in pin-hole 1 between the second and third pairs from the right and work a cst with these two pairs.

Pin-hole 2

With the left-hand pair from pin 1 and the pair from pin B, work half stitch (hereinafter hs).

Place a pin in pin-hole 2 between these two pairs and work another hs with the same two pairs.

Pin-hole 3

With the left-hand pair from pin 2 and the pair from pin C, work hs.

Insert a pin in pin-hole 3 between these two pairs, and work hs with the same two pairs.

Take out pins A, B and C, and carefully pull down loose loops.

Pin-hole 4

Work as pin-hole 1.

Pin-hole 5

Work as pin-hole 2, using the left-hand pair from pin 4 and the right-hand pair from pin 3.

Pin-hole 6

Work as pin-hole 1.

Pin-hole 7

Work the pair from pin E (weavers) to the right in cloth stitch (hereinafter cs) through the next three pairs. Twist the weavers right over left twice and put a pin between the weavers and the last pair passed through.

Samples of the traditional Ladder and Little Torchon Fan patterns.

Pin-hole 8

Work back through the same three pairs in cs. Twist the weavers right over left twice and put a pin between the weavers and the last pair passed through.

Pin-hole 9

Work as pin-hole 7 but work through four pairs.

Pin-hole 10

Work as pin-hole 8 but work through four pairs.

Pin-hole 11

Work as pin-hole 7 but work through five pairs.

Pin-hole 12

Work as pin-hole 8 but work through five pairs.

Pin-hole 13

Work as pin-hole 7 but work through four pairs.

Pin-hole 14

Work as pin-hole 8 but work through four pairs.

Pin-hole 15

Work as pin-hole 7, working through three pairs.

Pin-hole 16

Work as pin-hole 8, working through three pairs.

Take out pin D and carefully pull down loops of thread.

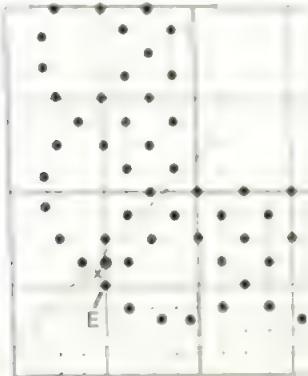
Put one twist, right over left, on each of the pairs hanging from pins 11, 13 and 15.

This completes a pattern repeat.

A corner

If you wish to make enough Little Torchon Fan lace to trim a handkerchief, it is advisable to work proper corners for a more professional finish, rather than gathering a straight length of lace round the corners.

To work a corner, make another pricking, using corner pattern (fig.3)



3. How to work a corner.

It is better to plan your work so that the join in the lace will be along one side of the handkerchief. Thus the length of the straight pricking, from the starting point, plus the whole inside edge length of the corner pricking should measure the same as the edge of the handkerchief to be trimmed. For example, if the handkerchief measures 18.5cm (7½") square, then, following fig.4, the length from A to D should also measure 18.5cm (7½").



4. Cutting the pricking.

In order to achieve the desired length of pricking, the prickings will have to be cut. It is best to do this when you have worked about 10cm (4") of the straight pricking.

Cut the bottom of the straight pricking, at B (see fig.4), horizontally immediately below the pin-hole which completes a fan (pin-hole in position 16). Cut the top of the corner pricking, at C (see fig.4), horizontally immediately below the first pin-hole of a fan (pin-hole in position E).

As the last pin-hole of a fan is equivalent to the first pin-hole of the next fan, these two prickings will butt one against the other, so that the pattern is continuous.

Bearing in mind the length of handkerchief and the desired length of the pricking, cut the bottom of the corner pricking, at D (see fig.4), in exactly the same way as at B.

You will later also have to cut the top of the straight pricking, at A (see fig.4), in the same way as at C, but do not do this yet as the first pattern repeat of lace is lying on top of the pricking and is in the way.

Pin the corner pricking on to the pillow, so that B butts against C (see fig.4).

To work the corner, following fig.3, work all the pin-holes before the dotted line.

To work pin-hole X, work the weavers to the right in cs through two pairs. Put a pin in pin-hole X and work back in cs to the pin-hole at the top of the next fan (pin-hole in position E).

Now turn the pillow round through 90 degrees so that you can work down the next straight side, and you will see that you must work another fan in cs before returning to the foot edge.

When you have worked round the corner, you will find that you have very little room to work on the pillow.

To move up the corner pricking, first remove all the pins from the first straight pricking.

Pin the loose threads carefully to the cover cloth as when moving up a straight pricking (see Bobbin lace chapter 2) but, instead of removing all the pins, lift the corner pricking, pins and lace all together and move the entire work to the top of the pillow in the same position as the original straight pricking.

Push all the pins carefully back into the pillow.

You now have room to replace the original straight pricking. First, cut the top of the straight pricking in the same way as the top of the corner pricking, as described previously.

Pin the straight pricking directly below the corner pricking, so that they butt together, and continue working down the pillow along the second side of the lace edging.

Work round all four sides, with the pieces of pricking leap-frogging over each other, until you meet the first pattern repeat on the first side.

Finishing off

When all four sides have been completed and the last pattern repeat has been worked, pin the very first pattern repeat back into place on to the pillow, inserting pins into all the original pin-holes. It is helpful to push these pins



right down so that the heads are flush with the pillow.

Each pair of bobbins must now be linked to the hole in the lace at the pin-hole to which it would normally travel.

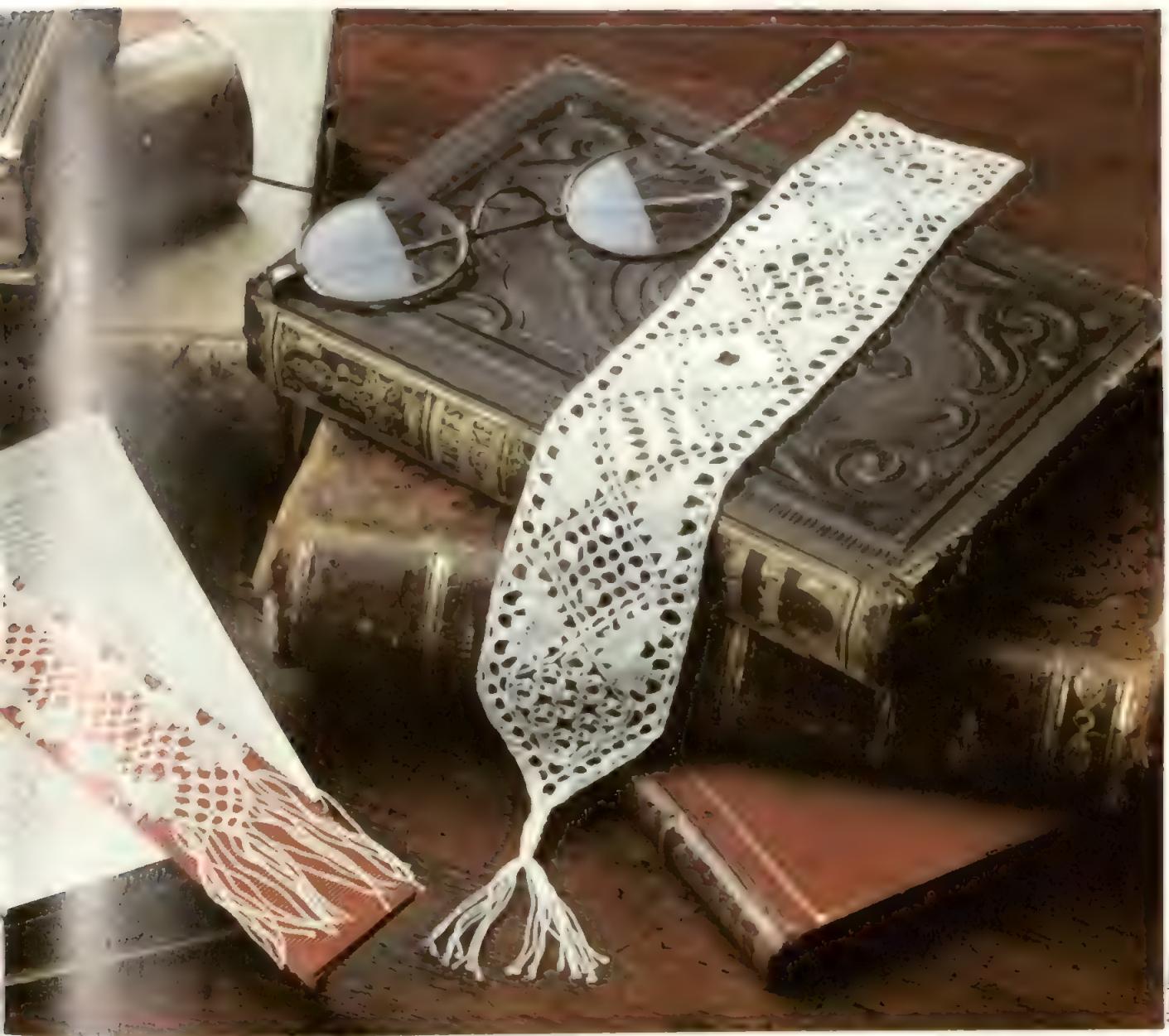
To make this link, take the relevant pin out of its pin-hole. Push a fine crochet hook through the little hole in the lace where the pin was and draw one thread of the corresponding pair of threads through the hole to form a loop.

Pass the partner bobbin of the pair through this loop in the thread so that the two threads are linked.

Tighten the loop and replace the pin to hold the lace firm.

Tie the two threads together with a reef knot against the pin.

There are eight pairs of bobbins, hanging from pins 6, 11, 13, 15 and 16. The linking should be done as follows:



Alan Titchmarsh

- The pair from pin 11 would normally travel through the two pairs from pin 6 to pin-hole 1 (pin 1 is a foot pin). In order to preserve the foot edge, work as pin-hole 1 until the point at which you would normally insert the pin. Make a link between each of the two right-hand pairs and the hole at pin 1.
- The third pair from the right does not naturally travel to another pin, so make this link with the bar between pins 1 and 2. This also preserves the vertical line of the pattern.
- The pair from pin 13 is linked to the hole at pin 2.
- The pair from pin 15 is linked to the hole at pin 3.
- The pair on the extreme left-hand side from pin 16 (weavers) is linked to the hole at pin E.
- The two passive pairs of threads, hanging between pins 16 and 15, can

also be linked to the hole at pin E. It is neater, however, if they are darned into the work by hand after the lace has been taken off the pillow, in which case the bobbins should be cut off and the loose threads left for the time being.

- When the linking is complete, cut off all the bobbins and take out all the pins. Remove the lace from the pillow.
- If you are darning in the two passive pairs of threads, take each thread in turn and, using a fine needle, make a couple of tiny darning stitches into the fan of the first pattern repeat. Cut these threads off flush with the lace.
- To neaten the join, using one of the weaving threads on the extreme left and a fine needle, neatly oversew all the other loose ends of thread along the diagonal line. Alternatively, if you find this difficult, you can simply cut
- all the loose threads close to the knots.
- Whichever way you choose to work, this side will obviously be the wrong side of the piece of lace when you come to sew it to the handkerchief.
- Stitch the lace to the handkerchief by oversewing edge to edge. Take the thread alternately into the hole where the foot pin was and into the gap between the foot pins. Ensure that your stitches are neat and small.
- Try to avoid pressing the lace but, if this is absolutely necessary, press on the wrong side, using a soft pad, such as a folded towel, under the lace, so as not to crush the threads.

Bobbin lace bookmarks are natural complements to old bindings. The narrow bookmark backed in red is a variation of Little Torchon Fan by Rachel Woodward.

Traditional armchairs



This is the first of three chapters on more advanced upholstery, showing a fully padded armchair (in this chapter), a chaise longue and a chesterfield settee.

These are among the most complicated pieces of furniture to re-upholster mainly because of their size. All three use the basic techniques of webbing, springing, stuffing and stitching and usually their application is very similar to that described in earlier upholstery chapters. Therefore, if you feel confident about these techniques, you can probably tackle these pieces of furniture successfully. However, you must be prepared to allow plenty of time, working for short intervals over several weeks, if necessary, and without trying to do too much at one session.

The techniques involved in the re-upholstery of the scroll arms and padded front border on this chair are similar to those used on other areas.

Planning your work

It takes a professional upholsterer two to three days to strip down and rebuild a fully padded armchair by traditional methods, so it will certainly take the amateur much longer. Therefore, try to find somewhere convenient to work and where you will not have to clear up after each session. A spare room or garage is a far better workshop than the kitchen which you may have previously used for smaller projects.

If possible buy, make or borrow a pair of trestles on which the chair can stand. You can convert woodworking trestles by attaching narrow fillets of wood round the top edge to prevent the chair from slipping off.

You can, of course, work on a table but the chair may keep slipping. Alternatively you can work on the floor but this is tiring because much of the time you will have to work with your knees bent.



Jerry Tubby

Above: wing armchair, before re-upholstering has begun.

Preparing the chair

Start by stripping off the old cover as described in Upholstery chapter 10, page 1830. Remove any wadding and the calico undercover if there is one. You can then examine the upholstery underneath.

Look carefully at the webbing and hessian supporting the stuffing on the arms and back; look at the scrim covering them. If they are torn and the stuffing is lumpy or falling out, they probably need replacement.

Test the rigidity of any stitched roll edges—if these are flabby but still in good shape and the materials are sound they can usually be repaired without being completely stripped. However, if the edge has completely fallen back—as on the armchair in the photograph above—it is wiser to strip it off and replace it.

Tilt the chair so that you can examine the seat webbing and springing from underneath. If the webbing is broken but the springing sound, the webbing can easily be replaced from underneath without disturbing the remainder of the seat. However, if the springs are out of shape or the cord lashing them together at the top is broken, you should strip out the seat completely.

If you feel that yours is a borderline case, it is much wiser to take the safer course and strip back to the frame however tedious this may seem. With the cost of the covering fabric and the amount of work you will be doing to apply it, it is essential that the innards of the chair are in good order.

If you do decide to strip off the upholstery completely, remember to make notes and sketches at each stage about the number and positions of webbing strands, the edges which are stitched into rolls, etc.

Right: the wing armchair (shown above before restoration) has had its upholstery repaired and has been fitted with a new velvet cover.







1. When replacing webbing where you are not removing the springs, lay the strands between the springs (rather than over them) for tightness. The springs can then be pushed inside the webbing.



2. Leave the back edge open when attaching the hessian to the wings so that successive layers can be pulled through. Notice how the original stitched roll at the top has been re-used.



3. The original padding was removed in one piece from each section so that it could be re-used. It was then covered with new scrim and top stitch worked along any roll edges.



5. The main cover is applied over a layer of polyester wadding for softness. To fit the fabric round the frame, the edge is folded back and cut in an elongated Y shape.



6. To ensure there are no gaps between the arms and seat, the fabric covering the inside arms is pulled through under the tack bar and tacked to the side face of the seat frame.



7. The edge of the fabric is clipped to give enough ease for fitting the cover over the lower wings. At the top it must be pulled firmly and evenly so no fullness is left on the front edge.

from normal as shown in the box opposite. If you have scroll arms, pad and stitch them as for seats.

The cover

The method of covering traditionally upholstered armchairs is very similar to that used for foam-padded chairs (Upholstery chapter 10).

If you are simply re-covering the chair without touching the upholstery, tease out the top stuffing on each section and add more if necessary. Place new wadding over the calico cover. It is always worth applying a calico under-cover—even if this was not on the original—because it will help shape

the top stuffing and it will give you practice at fitting and cutting.

The most usual mistakes in applying the cover are the incorrect alignment of the grain, incomplete pulling of the sections over the stuffing to make the cover smooth and taut, and inaccurate cutting round upright parts of the frame.

The grain must always be square on the frame with the selvedge (warp) threads running perpendicular to the floor at the centre of the relevant section, although it can be pulled out of square at the edges where the stuffing tapers off.

Tautness is essential on each section



1. To enable the main cover to be pulled through, the back edge on the wings of the calico cover is left open and the inside arm panel is tacked to the outside face of the tack bar.



Jerry Tubby

8. Slip stitching the top and front edges of the outside wing fabric. The back and bottom edges can be tacked to the frame because they will be covered by the remaining panels.

and each piece must be pulled as smooth as possible without overstraining the fabric. To test whether you have pulled it tight enough, run the palm of your hand over the surface —there should be no wrinkles. Always pull the fabric with the grain—if you pull with the bias, it will stretch.

Cutting. To fit the fabric round upright sections of the frame, turn it back so that the fold is level with the frame. Cut from the edge in a line which is at right angles to the fold and pointing to the centre of the upright to within 1.5cm (½") of the fold. Then cut at an angle to each corner of the upright of the frame.

Independent sprung edges

These were devised to make the front edges of seats more comfortable. The front rail of the frame is higher than the remaining three rails of the seat and the springs used are 7.5cm-10cm (3"-4") lower and also softer than the other seat springs.

Start by attaching the main seat springs in rows on the seat in the usual way (Upholstery chapter 3, page 468). On some seats you may find it easier to make two strands of lashing across the rows, one tying the middle rungs of the springs and the other across the tops (fig. A).

□ Place the edge springs in position on the front rail. Use netting staples to fix them to the rail.

□ Cut a strip of webbing to the length of the rail and pass it through the springs over the bottom rungs and tack it to the rail between the springs. This prevents the springs from squeaking when they are compressed and touch the rail.

□ Cut a 15cm (6") length of webbing in half lengthwise for each pair of edge springs. Tack one end of a strip to the left of the first spring on the front rail as shown in fig. B, pass the other end up and round the middle rung, pulling the spring forward. Tack down to the right of the spring. Repeat for the remaining springs.

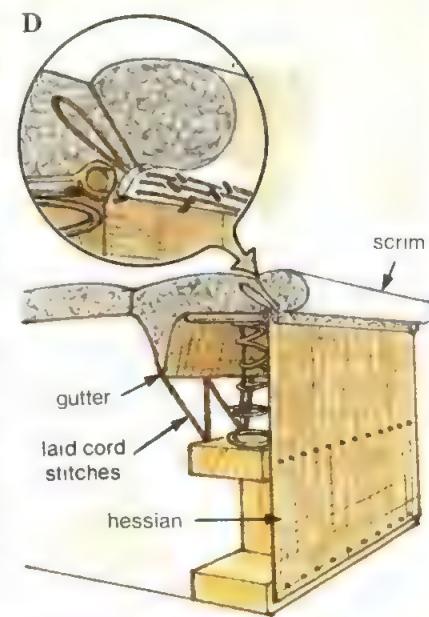
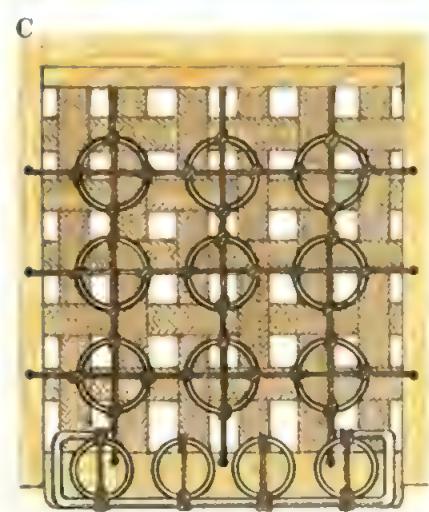
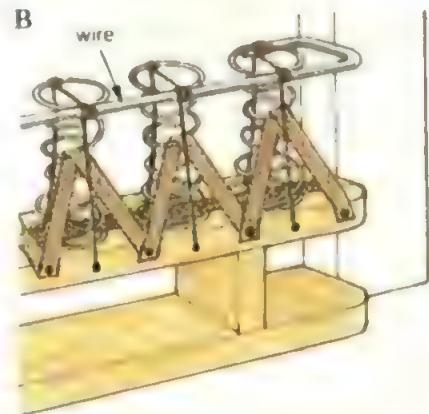
□ To form a firm edge, a piece of cane or heavy wire is lashed along the top at the front of the springs (figs. B and C). If you have to make a wire, bend the ends to the shape as shown.

□ Lash each front spring from the back at the bottom, over the top to the front edge (see fig. B).

The hessian. Cut a piece of hessian large enough to cover the top and front of the seat plus 20cm (8") for a gutter. This gutter is made behind the edge springs to allow them to move freely from the other springs. The gutter is held down with laid cord stitches which are pulled down to the front rail and held with improved tacks between each spring (fig. D). Tack hessian in place and stitch to springs and wire.

Stuffing. Apply the first stuffing over the hessian, tucking plenty into the gutter.

□ Apply the scrim over the stuffing, making a roll at the front. Because of the edge springs you cannot tack the edge of the roll to the frame; instead, stitch it to the hessian with twine and a curved needle (see fig. D). Then stitch the edge into a roll in the usual way.



Thatching a dovecote

A thatched roof, as well as having a rustic appearance, keeps a house beautifully cool in summer and warm in winter. It used to be the cheapest form of roofing, though now the labour and materials required make it expensive. Today thatchers are very much in demand and there is a waiting list of young men wanting to be taken on as apprentices.

Thatching is one of the oldest methods of covering a roof and the craft of the thatcher was developed many centuries ago. However, due to the nature of the material, thatch does not last very long and there are hardly any examples around today that are more than a hundred years old. Methods and styles of thatching vary from one part of the world to another depending on local custom, climate, and the materials available.

The main disadvantage of a thatched roof is the risk of fire and it was rarely used for important buildings in Europe after the 13th century. But a lot of country dwellings were thatched until the 19th century when quantities of cheap Welsh slate and other roofing materials became generally available. Haystacks and corn ricks were also protected by thatch until quite recently: a well-thatched rick was a source of pride to a farmer.

Fig.1 shows the base and walls of dovecote made ready with rafters and

Thatch is usually of reed or straw. The three types which are most commonly used are wheat straw; combed wheat straw, which is misleadingly known as



Bundles of thatching grass.

Devon reed or wheat reed; and Norfolk reed. The latter (which is a true water reed) lasts the longest—one roof should be good for forty or fifty years. A damaged roof can be repaired; it does not have to be completely re-thatched. Regional variations have persisted to the present day.

Since the advent of the combine harvester long straw has been difficult to obtain. However, some farmers are again growing long-stemmed varieties of corn and can be persuaded to harvest it in the old style so that the straw is

battens. The walls of the dovecote are 38cm (15") high and 30cm (12") wide.



long enough to use for thatching. Different types of thatching require different tools, and these tools tend to be called by different names in various places. For example, there is an implement called a 'leggett' which is used for butting up Norfolk reed, while a similar tool for use with wheat reed is called a 'drister'. The bunches of reed are called 'bundles' in one area, 'yealms' in another and 'nitches' elsewhere. On top of the differences from one area to another each craftsman has his own style of decoration. Almost any structure can be thatched provided that there is a framework to which the thatch can be attached. The same principles apply to a house or to any other building. The thatcher starts at the eaves and works up towards the ridge. A fairly steep pitch, no less than forty degrees, is desirable to throw off the rain.

Thatching a dovecote

This dovecote can be thatched by a skilled thatcher in an afternoon, but a beginner should allow a weekend to complete the job.

You will need:

A bucket of water.

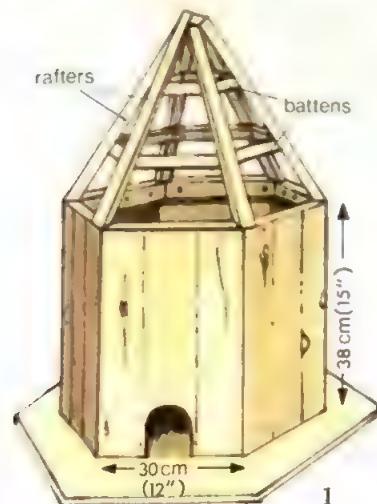
3 bunches of wheat reed—each bunch contains about 6.5kg (15lb). Long straw or Norfolk reed will also do.

Enough osier withies or hazel sticks to make about 60 'spars' (bent twigs, 35cm (14") long which hold the thatch). A thatcher's 'drister' or mallet (any wooden mallet could be used instead). A 'spar hook' or knife such as a strong sharp penknife.

Binder twine, about 6m (6yd).

Wire 1.5m (5') long and pliers.

A thatched dovecote makes a delightful garden attraction. Designed by H. E. Wright.



Preparing the reed. Dampen the reed by plunging the ends into a bucket of water. Then turn the bundles upside down and leave them to stand for two or three hours so that the moisture can run back down the reeds.

For thatching a house the reeds should be 91cm (3') long, but 62cm (2') is long enough for a dovecote.

Make a 'spring' round the top edge of the wall for the thatch to rest on. This could be a wooden ledge, but it looks better if it is made of a bundle of reed.

Tie a bundle about 4cm (1½") thick with binder twine—the ties should be about 8cm (3") apart.

Tie this bundle horizontally to the bottom of the rafters. Any knot will do provided that it is tight (fig.2).

With shears cut the end of the bundle at an angle so that the next bundle can be fitted snugly.





3

The first course

- Tie one end of about 91cm (3') of twine round the first batten and then repeat on the batten above. (It may be necessary to make a join in the twine later on. It is easier to do this than to work with a long piece which gets in the way as you work.)
- Take a double handful of reeds and make the ends even by knocking the bundle on the ground.



4



5

- Place the bundle on the roof with the tops of the reeds pointing upwards.
- Tie the bundle to the battens taking the twine clockwise round the bundle and then loop it back under itself (fig.3).
- Make the third fixing by tying the top of the bundle not to a batten but directly on to the rafters.
- Take a second bundle and fix it to the left of the first one with the same

pieces of twine so that it is tied both to the batten and to the first bundle of reed. Make sure the knots are tight.

- Repeat this all the way round the roof until a complete course has been laid. Tie the last bundle to the first one (fig.4).

The reeds must all point to the apex of the roof. If they begin to 'gain' because they are too bunched up it may be necessary to trim off some of the top



9

The ridge. The final course or ridge of the thatch is held in place by a withy called a 'stretcher' (also known as a 'ligger' or 'runner') which is held by spars. The bottom of the ridge is not graded but is cut in a neat line. The sticks and spars on the ridge are the ones that show on the finished roof.

- Take another bundle of thatch and place it on the roof. Pin spars into it to hold it in place while you fix the withy.
- Place the withy on the thatch one-third of the way up the roof and hold it in place with spars.
- Add more bundles working round the roof and bend the withy round as



10

you go (fig.9). Try to keep the bottom of the ridge level—this can be done with the side of the drifter or a mallet. A much better finish is produced if you use one withy to encircle the whole roof. Tuck the end under the first spar.

- To make the next stretcher, bend a withy, twist it into a wreath and then put it over the top of the roof.
- Pull the withy down and hold it in place with spars (fig.10).
- Trim the bottom of the reed level with shears or scissors. Cut at an angle of about 45° pointing inwards and upwards (fig.11). When a level bottom has been established the bottom of the ridge can be trimmed level and the two



11

stretchers checked to see that they are level.

The shape of the cone at the top is improved if another thin layer of thatching is put round at this stage.

- Keeping the distance between stretchers the same, make another one to fit round the roof.
- Take a small handful of reeds and bend about 30cm (12") of the thick ends back up along the length.
- With the thin ends pointing upwards, push the bent ends through the stretcher to form a ridge half way between the two stretchers. Continue right round the stretcher.
- Tie a temporary band of binder



6



7



8

ends at an angle.

Do not worry if the reed seems to come too far down the wall of the dovecote. This will be trimmed later.

The second course is fixed with 'spars' instead of twine. The spars are made of split osier withies (or hazel) and are about 35cm (14") long. A spar is used like a hairpin to hold the thatch in place. For temporary fixing, the spars are loosely stuck in but for a

permanent hold they should be banged well into the course of reed below.

Make a point at each end with a spar hook or a sharp penknife (fig.5).
 Bend the spar double.

Take the first bundle of the second course and place it on the roof slightly higher than the first layer. Pat the bottom up so it is graded. Hold the bundle in place with a spar driven through to the first layer of reed two-

thirds of the way up the roof (fig.6).

Then put the next bundle in place. Make a band by taking a dozen strands of reed from one bundle and twisting it down under the spar holding the next bundle, and so on round the roof (fig.7).
 Make a second band of spars and reed above the first one. Pat up the bottom of the bundles with a mallet or by hand. The second course is then complete (fig.8).



12



13



14

twine round the top of the roof to hold the thatch tight and then trim the top of the bundles of reed to a neat cone (fig.12). If the reeds at the top tend to spread put a band of wire round to secure them.

Now make the final stretcher. This is another withy wreath which is put over the top. It is too high on the roof to be fixed with spars so tie it to the stretcher below with fine gauge wire. Four ties will be adequate. Make the wire knots neat with pliers. Remove the temporary band of binder twine.

Finishing touches. To decorate the thatch make split withies like the spars but do not bend them double. Insert the

sticks under the two lower stretchers in a cross-stitch pattern. Hold them in place with spars at the cross of the X and nearer the ends as necessary (fig.13).

Trim the edges of the ridge and the eaves (fig.14). Pull out loose pieces of reed. Trim downwards and outwards so the cut ends of the reed have an oblique angle.

Other things to thatch

Other items besides a dovecote can be thatched by the inexperienced amateur. When thatching a structure with a ridge pole the final course is bent over the top. Dog kennels and rabbit

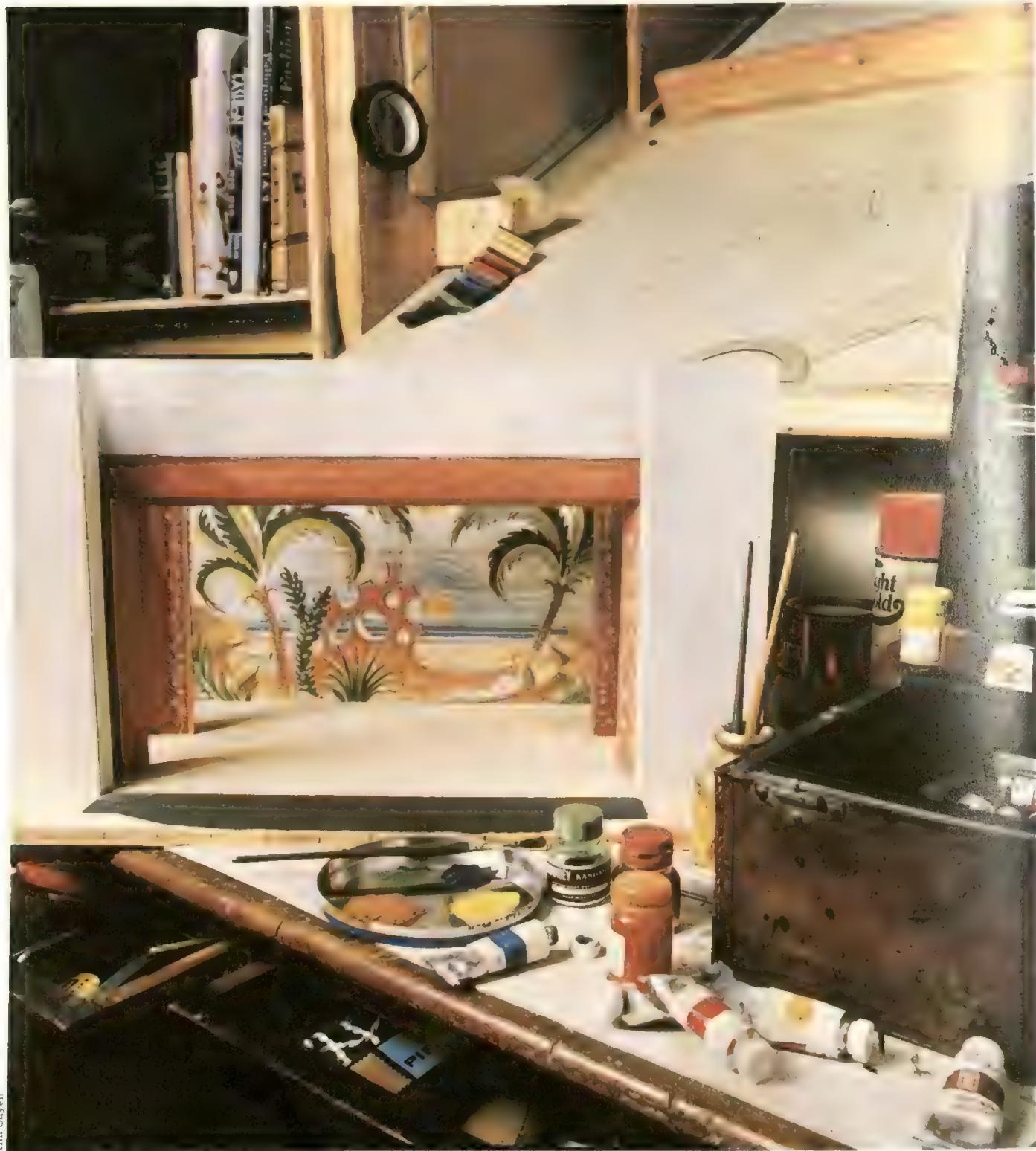
hutches are suitable because of the insulating qualities of thatch and very attractive sun shades can be made given a suitable frame to work on. The beginner might find that it is easier to start on a reasonably large structure as it is less fiddly to work on.

CAUTION: The beginner should not attempt to thatch a shed or any building which would involve working from a ladder—even experienced craftsmen have accidents—there is enough to do without worrying about balance.

Stage scenery – back-cloths



The use of illusory back-cloths goes back to the early court spectacles of the 16th century. The back-cloths were used with covered 'wings' to suggest depth and perspective to a set. Back-cloths are perhaps most often used in pantomimes and musical shows where frequent changes of scenery are required. In the theatre a quick change of scenery can be accomplished very speedily by dropping in a 'clown'.



changing the location of the play and enabling more scenery to be changed behind it ready for the next scene. Many theatres have complicated mechanical methods of dropping back-cloths but these are not always available in halls and public rooms where amateur productions are often staged. Under these conditions one sometimes needs to use more than a little ingenuity.

Making a back-cloth

One of the most essential requirements for making a back-cloth is having a large floor space.

A back-cloth is generally made of lengths of canvas sewn together horizontally with wooden battens at the top and bottom to keep the cloth flat.

The size of the back-cloth will obviously depend on the size of the stage. However, scenery canvas is generally sold in 1.8m (6') widths, thus it is simplest if the total height of the back-cloth is any multiple of this. There are two fairly easy ways of constructing a back-cloth.

The sandwich batten method. For a back-cloth about 5.4m (18') high and 4.5m (15') wide you will need 13.5m (15yd) of scenery canvas 1.8m (6') wide cut into 3 lengths of 4.5m (5yd).

Sew the three lengths of canvas together along the 4.5m (5yd) sides (fig.1). (This can be done for you by the scenic suppliers.)

The canvas must now be sandwiched at both ends between wooden battens. The battens should be 4.5m (15') long and 75mm x 25mm (3" x 1").

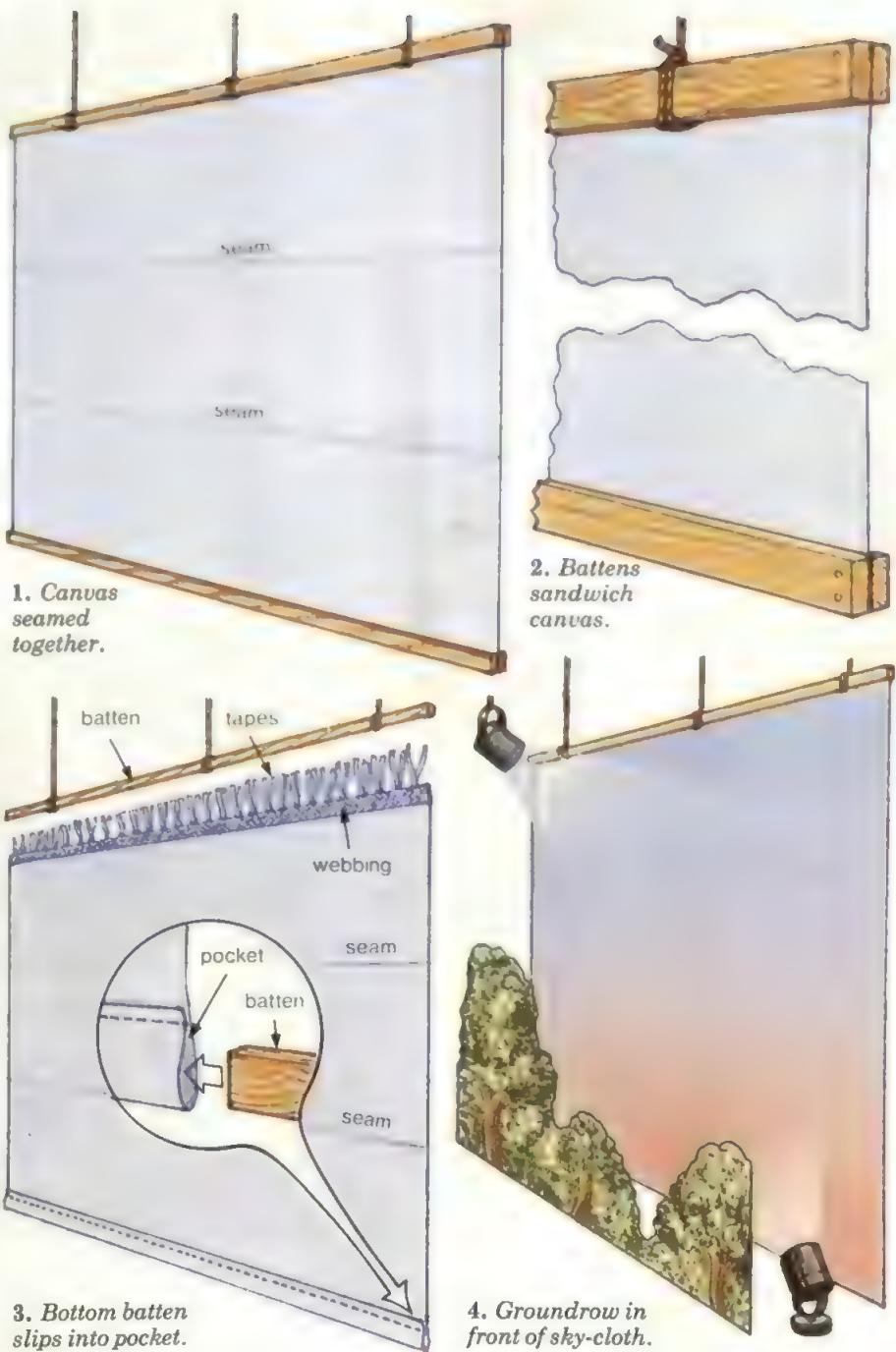
Sandwich the 4.5m (15') edge of the cloth between the timbers so that the edges are aligned. Using 4.5cm (1½") nails, nail the battens and canvas together. Repeat this process at the other end (fig.2).

Attach ropes to the top edge of the back-cloth passing them through a slit in the canvas and the back-cloth is ready to be hung. The edges of the cloth remain unsupported, the weight of the bottom batten holds the cloth taut, flattening it out. The horizontal seams allow for stretching which vertical seams would not.

The main problem with the sandwich batten back cloth is the storage. Obviously you will require a space at least the same size as the battens. Another drawback is that the battens can only be used once.

A pocket back-cloth overcomes these problems. The canvas is seamed together as for the sandwich back-cloth. The bottom edge should be

Before construction, a model stage should be made with a back-cloth, and colour schemes tested.

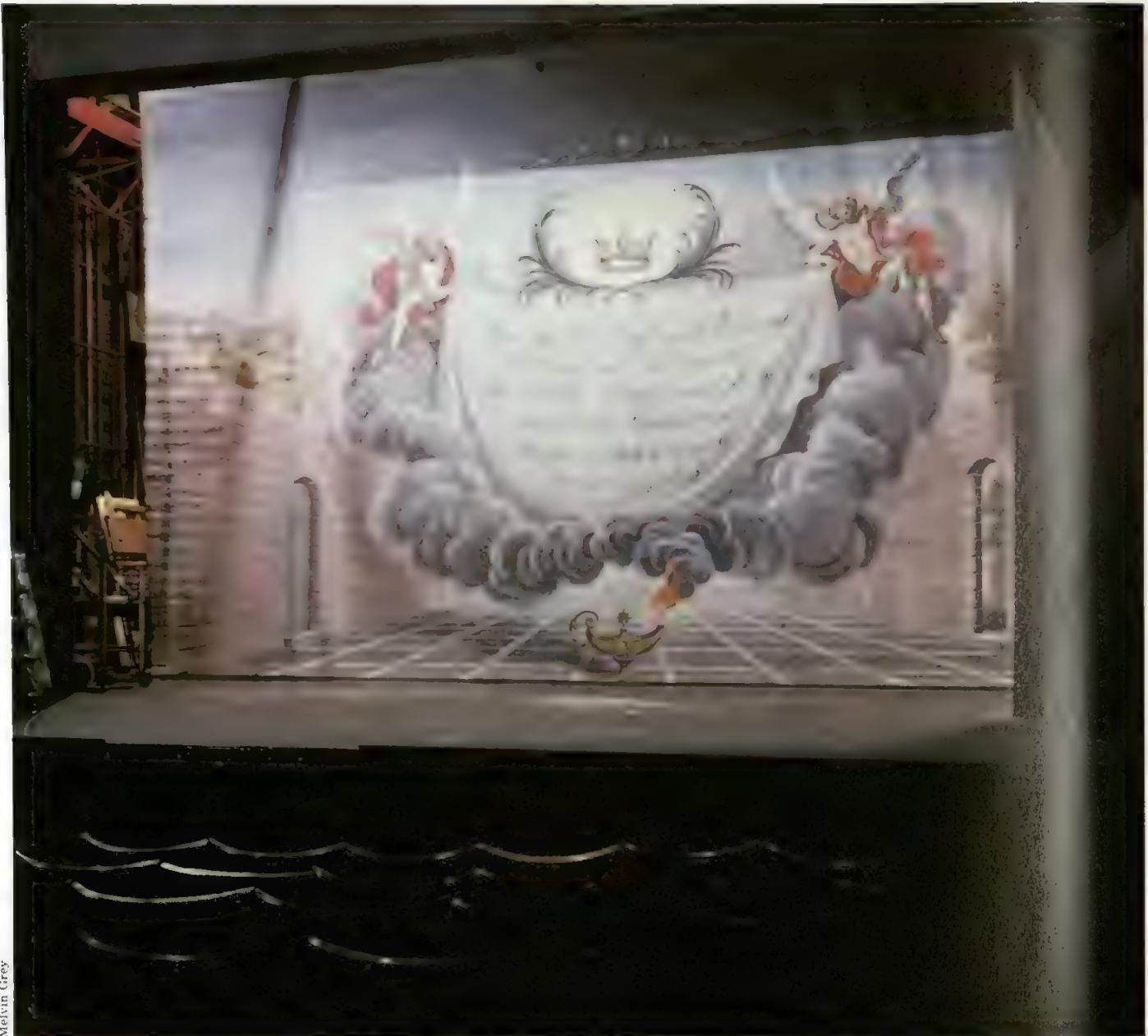


Paul Williams

Sky-cloths

Often you will require a plain seamless back-cloth to serve only as the sky. It is possible to buy back-cloth fabric up to 9m (30') wide. This does mean you will get a seamless cloth but the fabric is very expensive. Thus, it is worth while having the sky-cloth a neutral colour and using lighting to produce the required colours.

The cloth is woven differently from canvas and can be more awkward to paint because of this. Keep one cloth as the sky background making different exteriors by putting low groundrows (low flats) in front to suggest gardens, fields, houses etc (fig.4).



Melvin Grey

Painting a back-cloth

The English have always painted back-cloths hung on paint frames. This requires either a sophisticated pulley system or a moving bridge similar to that used by window cleaners on high rise buildings. Good results can be equally well achieved by painting the back-cloth on a clean flat floor.

In Italy, back-cloths have always been painted in this fashion, the painters wearing soft slippers and using long brushes to avoid stooping.

The canvas must be primed so that it stretches and to ensure the paint does not fall off. For this you will need a size solution (Paint chapter 39, page 2594). The size solution should be fairly weak: 0.5kg (1 lb) powdered glue size to 7 litres (1½ gallons) boiling water makes a suitable solution.

It is possible to apply the ground

colour as the primer but the shade will be slightly darker than were it applied on to primed canvas.

Before actually painting the back-cloth it is best to prepare a small-scale drawing of the scene on graph paper. Once the cloth has been laid out, primed and left to dry, use charcoal to divide the canvas into squares that relate to the squares on the graph paper. Then transfer the drawing on to the canvas square by square.

Paint. To keep the cloth supple do not mix your scene paint too thick (Paint, chapter 39).

Start by painting the background areas then go on to the detail and shading. The stage lighting may differ from the lighting under which you are painting; different colours will be affected in different ways. If possible, try out your colours under the actual stage lighting.

This back-cloth by Rex Whistler at the Vanbrugh Theatre, Royal Academy of Dramatic Art, London was painted for a ballet during the 1930's.

Dyes. The back-cloth can also be painted with dye. Up until the mid 19th century vegetable dye was used for back-cloth painting. The shades were more muted than those available today and would fade more quickly. Since then the invention of aniline chemical dyes has revolutionized back-cloth dyeing, bringing a whole new range of astonishing deep, bright and permanent colours.

The dyes should be used carefully. The scenic paint suppliers from which you buy the dye will advise you on how to use it and mix it as these vary considerably.

One important point to remember is

that though one can repaint over scene paint it is virtually impossible to overdo. Thus it may be uneconomical to use it, except for special effects.

The advantages are that the cloth remains pliable and the finest materials can be dyed.

Other materials can be used for back-cloths. On really cheap calicos and linens very rich effects can be made with aniline dyes. These often look better than expensive velvets and silks.

Gauzes

A variation of a solid back-cloth is to have a gauze cloth. This is an open weave fabric that can be painted on and when lit from the front or audience side it appears solid. When the front lighting is dimmed and light brought up behind the gauze will seem to disappear. Gauze can be bought from scene suppliers.

Designs can be appliquéd on to the fabric. This will allow light through the gauze area but not through the appliquéd area. The appliqués can be made from linen or calico or layers of gauze. With layers of gauze you can build up the design to any thickness and the light from behind will show in varying intensities.

Plain white gauze is excellent for fog



A back-cloth scene of Venice designed by Anthony Hollander.

or mist effects or lending a very ethereal air to a scene.

The gauze can be painted with thin scene paint or aniline dye but care must be taken not to block the weave. If the weave is clogged you will not get a good transmission of light.

For all stage scenery requirements it is worth using a good supplier who will

be able to advise you which are the best materials to use for a particular job.

The groundrow adds a new dimension to this back-cloth by Anthony Hollander



Alasdair Ogilvie

Texture, inlay and brocade

Yarn
weaving 32



In weaving, the word 'texture' does not always indicate rough and chunky fabrics. Many visual texture effects can also be created by contrasting the colours or by using texture weaves

with smoother yarns. An entire cloth need not be textured but have areas or bands of texture that add interest to an otherwise plain fabric. With the current trend for the 'ethnic'

look in fabrics, the natural greys, fawns and browns of handspun wools are popular as are the soft muted colours of vegetable dyes. Handspun yarns can be created easily by the handspinner but they are expensive to buy because of the time taken to produce them. However, there are also many commercially spun weaving yarns which successfully imitate and reproduce these textures and colours. Such yarns can also be obtained in white for dyeing at home.

The very thick textured commercial yarns such as 1½ cut or 2½ cut wools

Texture adds interest to these plain weave cushions by Mike Halsey



weave up very quickly and produce thick and richly textured cloth. For medium-weight fabrics more suitable for dressmaking, 5 cut, 7 cut or 9 cut woollen rough spun yarns are available. For lighter weight cloths use 12 or 14 cut wools or rough spun silk yarns. Cotton fancy yarns can also be used for texture effects in otherwise plain cloths. The most popular yarn is slub cotton (a yarn with alternate thick and thin areas) and cotton gimp (a fine crimped yarn).

Different fibre types can be woven together to create textures but, because of the problems that may arise with differential shrinkage (some fibres shrinking more than others), it is advisable to use only one kind of yarn for the warp and the other in the weft. Experimenting with different yarns using various setts, colours and textures in small samplers is a very valuable exercise. Yarns may look very different unwoven than they do in cloth and most woollen yarns change texture and colour when washed.

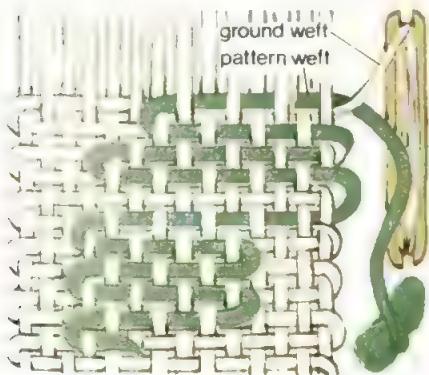
Added texture

Texture can be added to a cloth woven with rough or smooth yarns by using extra weft on top of the ordinary weft in some parts of the weaving. The main or background yarn is called the 'ground' weft and the extra yarn is the 'pattern' weft. The cushion in Weaving chapter 27, page 2302 uses an extra 'pattern' weft in a thick yarn against a 'ground' weft of a very thin yarn.

There are a number of pattern weft techniques. These can be used to weave all-over textures, border stripes or blocks of pattern areas.

Inlay

The name given to the simplest added weft technique is inlay (fig.1). The



1. Inlay pattern weft with ground weft.

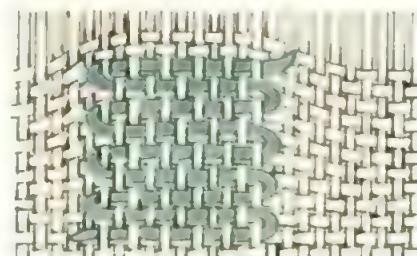
ground weft is woven across the full width of the cloth. The pattern weft is inserted into (laid-in) the same shed but not across the full width of cloth. Inlay patterns can be woven in one or more areas across the width of cloth and in one or more colours or textures.

The best effects are usually bold, simple shapes such as bars, squares, triangles and diamonds (fig.2). The



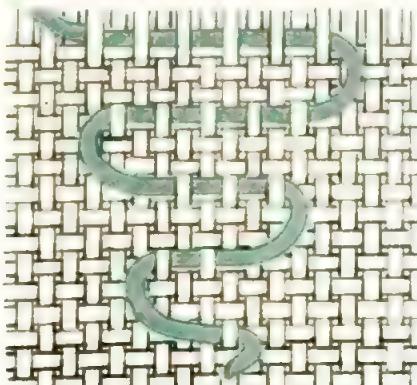
2. Bold, simple designs suit inlay.

yarn used for the pattern weft should be the same thickness as, or only slightly thicker than, the ground weft. Long vertical areas of inlay should be avoided because of the build-up of the extra weft which causes unevenness (fig.3). If this is a problem in a design,



3. Build-up is a danger with inlay.

it can be overcome usually by inlaying with every second or third ground pick (fig.4). The vertical loops where the



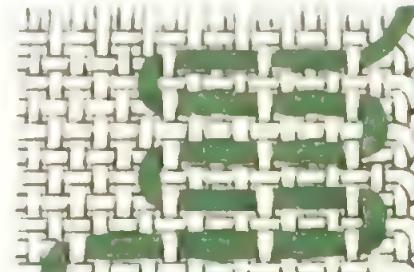
4. A simple way to avoid build-up.

pattern weft is carried up the cloth from one pattern pick to the next only show on one side of the cloth. The reverse face is therefore usually used as the right side because it is easier to weave inlay from the top surface.

Brocade

A modification of inlay is the brocade technique in which extra pattern wefts are used with an all-over ground weft but which float over the ground cloth in short leaps. There are two basic variations.

A **stitched brocade** is one in which a pattern weft floats over several warp ends and is then caught under a warp thread (fig.5). This warp thread is



5. Vertical line stitched brocade.

known as the stitching end. The stitching ends can either be picked up with the fingers, with the tip of the shuttle or by lifting the shaft controlling the ends. In fig.5 the brocade floats over three warp ends and is caught under the fourth. On a four-shaft loom with a straight draft and weaving a plain ground cloth any of the shafts can be used for the stitching ends. The shed sequence for weaving would be:

ground weft—shafts 1 & 3 up
ground weft—shafts 2 & 4 up
brocade weft—shaft 4 up
repeat sequence.

This sequence gives a vertical line effect. An alternative sequence for creating the brickwork effect shown in fig.6 would be:

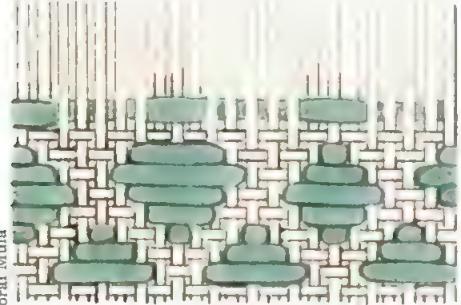


6. Brickwork stitched brocade.

ground weft—shafts 1 & 3 up
ground weft—shafts 2 & 4 up
brocade weft—shaft 2 up
ground weft—shafts 1 & 3 up
ground weft—shafts 2 & 4 up
brocade weft—shaft 4 up
repeat sequence.

Several areas of brocade can be woven side by side using finger skeins or small shuttles for the pattern weft. Designs are most effective when keeping to simple shapes. The cloth is not reversible and is most easily woven from the right side of the cloth.

True brocade is when the pattern weft floats either over or under whole groups of warp threads (fig.7). This

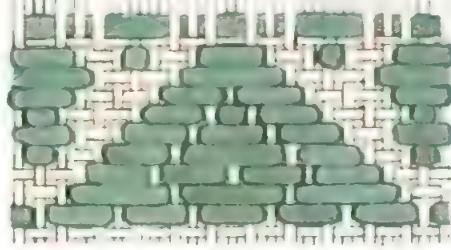


7. True brocade makes block patterns.

technique can be used for border areas or to pattern an entire cloth but usually only one pattern weft is used even if the design is in a number of smaller areas. Where there are a number of smaller unconnected pattern areas across the cloth, the brocade weft floats on the back of the cloth between the pattern areas. The ground weft is used to form the basic cloth and the brocade weft is then passed over or under several warp threads at a time to form the pattern floats. This pattern weft is most easily manipulated by using a stick shuttle which is approximately the width of the cloth.

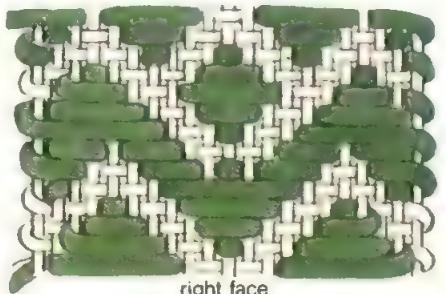
The length of the floats should be restricted to a maximum of about 1-1½cm (½"-¾"). Longer floats can be produced by catching the pattern weft under a warp end at the centre of the float or, if this produces too long a

float, then at 1-1½cm (½"-¾") intervals (fig.8).



8. Long floats must be stitched down.

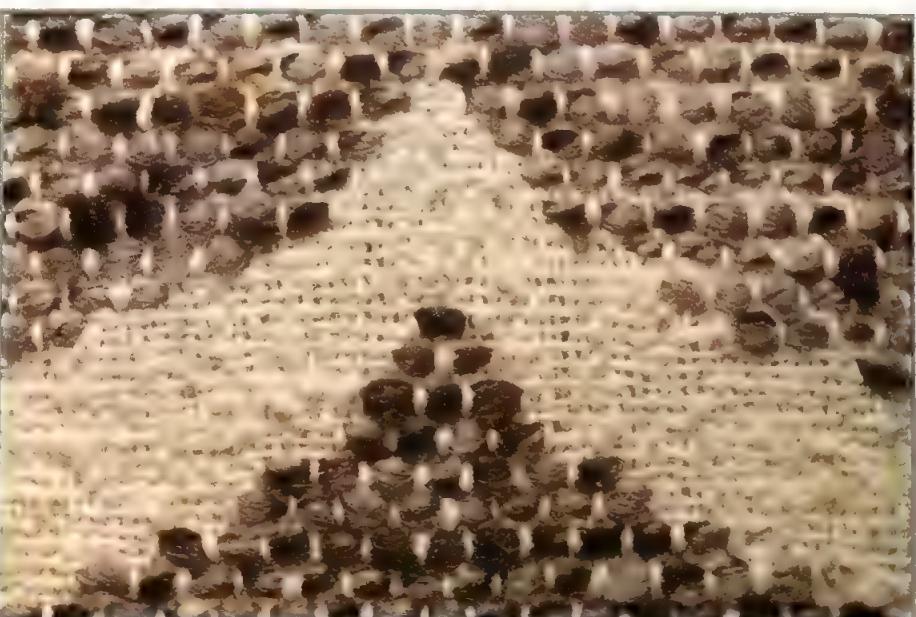
The pattern on the reverse side of the cloth will be the negative of the pattern on the cloth face. Thoughtfully planned designs in which the floats are not very long on either side of the cloth can therefore be reversible (fig.9).



right face



9. Well designed brocade is reversible.

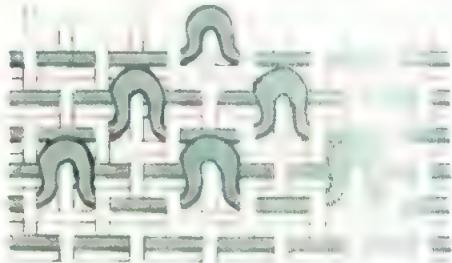


Pattern wefts are usually inserted with every alternate ground weft but if the build-up is not too great and the pattern area fairly limited in height, the brocade weft can be inserted with every ground pick.

The brocade technique is more effective if the pattern weft is fairly bulky but soft, such as a softly spun wool, or, if it is smooth and has some sheen, such as mercerized cotton or silk. Soft bulky yarns will give good coverage and can therefore be used in every second pick while the smoother yarns will be effective used in every pick.

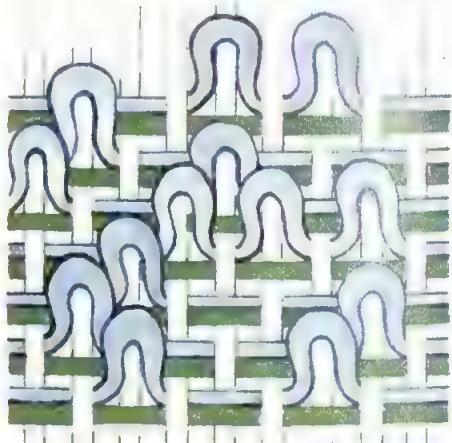
Pulled loop

The pulled loop technique is another which requires the use of a ground and pattern weft and is similar to inlay as the pattern weft travels in the same shed as the ground weft. The pattern weft usually travels across the full width of the cloth and can be in the same or a contrasting yarn. The texture is formed by pulling short loops of the pattern weft out between the warp ends (fig.10). These loops can either be



10. Textural pattern from pulled loops.

pulled up between alternate pairs of warp threads or at random across the width of the cloth (fig.11). To keep the



11. Loops can be pulled at random.

texture of the cloth consistent it is advisable to insert a pattern pick with every ground pick even though loops may not be pulled in every row.

A chunky handspun yarn is used for stitched brocade.

The sett for this technique should be slightly closer than for an ordinary plain weave, especially if cotton or silk is being used. The weft should be beaten firmly. The loops should be kept fairly short or they may get caught and pulled when the fabric is in use. Wool yarns hold better because of their rough texture. A further variation is to use two pattern wefts either in alternate picks or both in the same pick. In this way looped areas of different colours can be woven side by side (fig.12).



12. Pulled loops in two pattern wefts.

Chaining

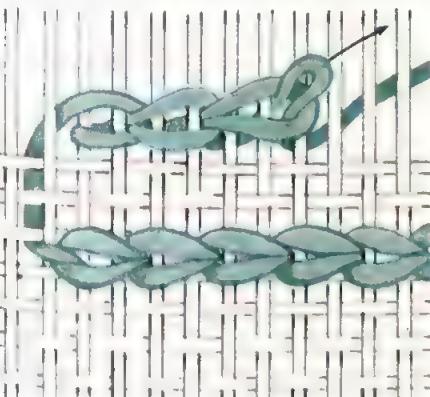
The technique of chaining (sometimes called 'idiot's delight') is like a simple crochet chain (fig.13) worked across



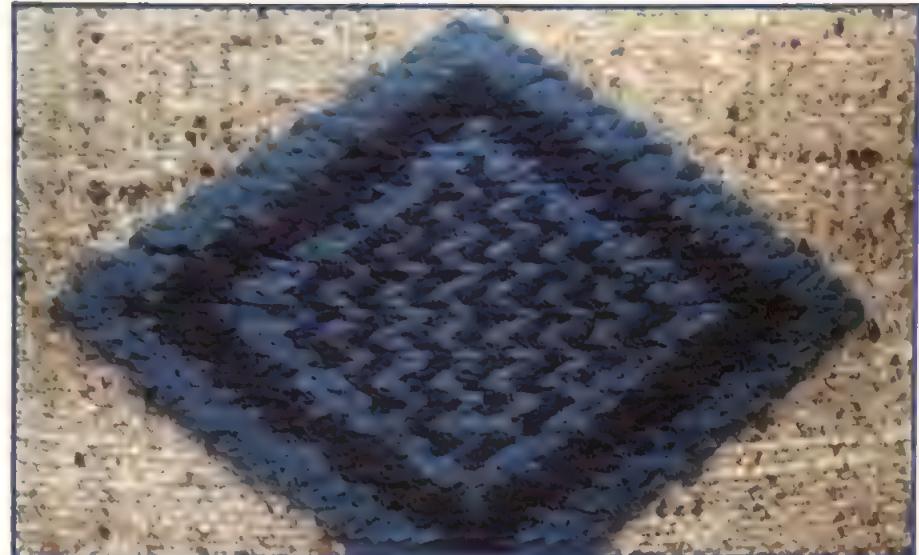
13. Chaining or 'idiot's delight'.

the width of the cloth between the threads. A coarse crochet hook can be used or the pattern weft can be manipulated with the fingers. The pattern weft can be the same as the ground cloth weft or it can be a contrasting one.

To begin the chaining, the end of the pattern weft is laid into the plain weave shed in order to fix it into the cloth. The pattern yarn should be at the back



14. Pattern weft forms a crochet chain.

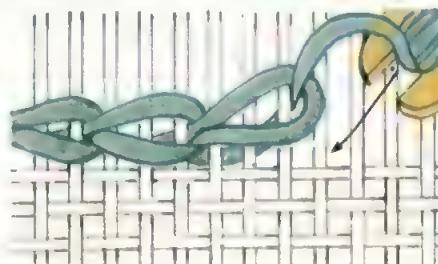


Detail of cushion showing raised knitting type effect resulting from chaining.

of the cloth as the chain loops are pulled from the back to the front of the cloth during weaving. A loop is pulled up between two warp threads and passed over one to five warp ends depending on the length of the loop required. Another loop is pulled up between the warp threads under the end of the first loop and through the first loop. The process is then repeated across the pattern area (fig.14).

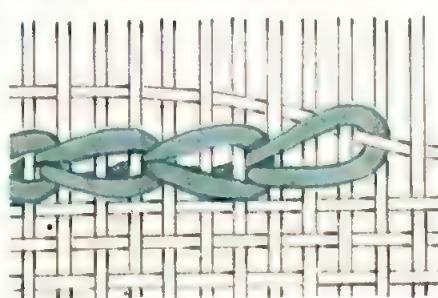
The last loop of a chain pick has to be 'locked' or the chain will pull undone. There are three ways of locking the chain.

To 'lock' you can bring the yarn up between the warp threads under the last loop and pass it through the loop and then back down through the warp ready for the next pick (fig.15).



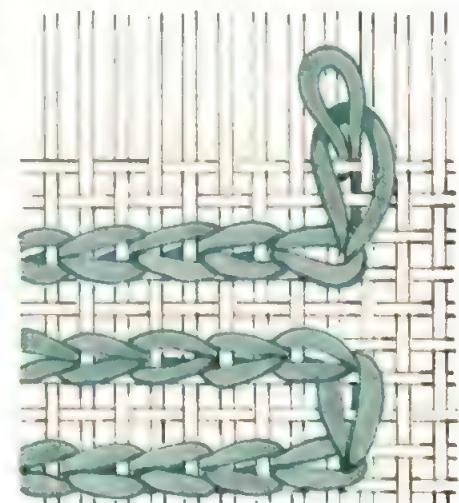
15. One method of locking the chain.

Another way is to pass the ground weft shuttle through the loop during the next ground weft pick (fig.16).



16. Locking by fixing with ground weft.

The third method is to pull a larger loop than is needed to stop the chain coming undone accidentally and then weave the required number of ground weave picks. Take the chain loop vertically up the cloth to start the next chain row (fig.17). The size of the last



17. A continuous chain made vertically.

loop will have to be adjusted to the required length.

This technique of chaining produces a chunky texture with an appearance similar to knitting. The pattern yarn should be reasonably smooth as a rough textured yarn is difficult to manipulate. Care must be taken not to pull the loops too tightly or the warp threads will be pulled together and the cloth will become narrower.

This is a very good technique for adding surface interest to rugs, wall hangings, cushions, place mats etc. With finer yarns and patience it is an effective technique for dress fabrics.

Stripping and polishing

Shellcraft 5



Many shells have a shiny interior coating of nacre, which is better known as mother-of-pearl. This substance is composed of the same silvery, shimmering material as pearls, but whereas pearls are very rare and therefore precious, mother-of-pearl can be obtained in large quantities and is one of the cheapest of all jewelry materials. The shimmery or iridescent quality of mother-of-pearl, which can vary from palest cream to rainbow colours, is caused by the layers of the mother-of-pearl lining. These are ridges which reflect light back from one to another, rather like a series of mirrors.

Shells which exhibit notable iridescence are the British ormer (which is fished by skin-divers off the Channel Islands), the top shell, the American abalone, which is not only iridescent but also coloured, the pearl oyster and the nautilus.

South Africa also possesses nautili and pearl oysters, many colourful turban and top shells and the iridescently surfaced giant snail.

Australia is the primary world producer of iridescent shells—and most of the pearl oyster shells carved into buttons and artistic objects come from here. Even religious carvings made in Israel are made from the Australian shell.

Pearl shells vary in colour depending on where they were fished. As the shell beds get nearer the Equator, the colour of 'mop', as mother-of-pearl is called in the trade, changes to 'golden lip', a warm, amber-coloured shell characteristic of the Philippines. Black pearl, or 'smoked pearl' is the characteristic shell of Tahitian waters.

The purpose of the iridescent layer inside the shell is to make it very smooth so that it will not irritate the

delicate 'mantle' or skin of the mollusc which lives within. The outside of an iridescent shell does not show any mother-of-pearl at all, because it is covered with a hard, horny layer of brown-grey material called the periostracum. This is made up of conchiolin, a horny substance, somewhat harder (Mohs scale 5) than the hardness of mother-of-pearl itself (Mohs scale 3).

The colour of conchiolin varies from shell to shell. In the giant snail, for example, it is an attractive silvery grey, while in a nautilus, it is a striking zebra stripe of maroon and white. The craftsman's first task then, in processing an iridescent shell, is to strip off the hard and uninteresting outside of the shell to reveal the iridescent surface.

Stripping

Stripping can be done in various ways. Small shells, such as British mussels which also have an iridescent inner shell, are simply left to steep in a solution of household bleach and water, in a proportion of one part bleach to four of water, until the acid in the bleach eats away the blue-black outside layer of the shell and reveals the silvery underside of the mother-of-pearl. It takes a day or two for the outside coat to disappear. Leave the shells in the solution in a glass jar and



inspect them from time to time to see how the stripping is progressing. Once the periostracum has been removed, the shells should be well washed, first in a little liquid soap and water, then in clear water, to remove all traces of bleach.

Stripping larger shells

Grinding will remove the periostracum of thicker shells. If an old-fashioned grindstone is available, you can force the shell against its edge while someone else turns the shell, but a quicker way is to use a small grindstone attachment in the chuck of an electric drill.

All grinding operations are best done outside because the ground periostracum gives off a very pungent odour and, though shells are made from harmless materials, some people are less tolerant to dust than others. If you have a lot of grinding to do, or if the dust disagrees with you, wear a sculptor's mask.

First cement the shell to a bench, using dop cement (lapidary's cement, which is a mixture of beeswax and resin, obtainable from rock and craft shops). Melt the dop cement over a wax taper or candle until it is fluid, then dab both the bench and the bottom of the shell with it. Stick the shell to the bench while the cement is still sticky. When the cement has cooled, the shell should stick firmly to the bench.

Work the grindstone in the drill slowly over the surface of the shell. Avoid cutting too deeply or making score marks. When you have ground away as much as you can with the grindstone, fit an abrasive head into a flexible drive and grind into all the small crevices.

Lever the shell off the bench with a screwdriver when you have ground one part, stick it down in another position, then grind again. When the whole horny outside layer has been removed and the nacre is shining over the whole surface of the shell, stripping is complete and the shell can be polished.

Stripping delicate shells

Some shells, such as top shells and nautili, have such thin layers of periostracum that it is inadvisable to strip them mechanically, but they can be stripped with an 'alabaster knife', as used by sculptors and obtainable from sculptor's tool merchants. This looks like a miniature scimitar except that its curved blade has a sharp edge on both sides. Sharpen both edges well with a whetstone and cradle the shell firmly between the knees with enough pressure to hold it without breaking it. Hold the knife by the point with the left hand and the handle with the right and scrape delicately at the outside covering, using the inside of the knife blade to fit snugly round the curve of the shell. Other sharp craft knives

with disposable blades can also be used, and a razor blade in a safety holder will strip any awkward patches.

Shells can also be rubbed down, first with coarse, then with medium and fine sandpaper, and then polished.

Polishing

A stripped shell has to be polished after stripping to bring out its beauty to the full. Rub first with finest flour sandpaper (usually 'O'). Then rub it with a wet cotton rag dipped in powdered pumice. Keep rubbing until a shine begins to show. Wipe off every trace of the polishing powder, dip another rag in the powder and polish afresh.

Finally rub the shell with a wet rag dipped in a tablespoonful of copper sulphate dissolved in a cupful of warm water.

To preserve the iridescence of stripped shells, keep them out of the sun as much as possible, or they will go 'blind', that is, lose their iridescence. A coat of clear lacquer or embedding the shells in clear cast plastic resin will preserve iridescence.

Shells are some of nature's finest ornaments. The iridescent quality of mother-of-pearl varies from the palest cream to rainbow colours. By removing the outside horny layer of the shell this shimmering surface is revealed.



Splitting shells

Shells can be split down the middle to show all the little chambers inside. This is usually done by professional shell craftsmen who use a lapidary wheel, but there is no reason why this should not be attempted at home. Practise on a broken nautilus shell before working on a perfect one.

□ Choose a fairly small shell. Cement one side to a board with dop cement. Clamp the board in a vice.

Make a cut along the top of the shell with a triangular-shaped file to start the saw cut. With a 2.5cm (1") wide metal piercing blade in a hack saw, cut very gently through the nautilus, lubricating the blade with water as you go.

Instead of cutting straight through the shell make a pencil line first and cut along the line from two directions so that the cuts meet.

Lay the two halves on a sheet of fine sandpaper and rub them gently on it until the cut edges are smooth.

Painting

Shells can be painted with the small pots of enamel paint sold for military miniatures. Before painting, clean the shell with a rag dipped in turpentine; then paint, preferably not over the entire surface but with a design which will allow the shell background to show through.

Gilt can be applied by painting a design on a shell with Japan gold size (tinted to show up against a white



Jerry Tubby

shell). Press gold leaf on to the size while it is still tacky, allowing it to dry hard, then gently brush off the residue of leaf with a stiff brush before burnishing smooth with a smooth stone such as bloodstone.

Dyeing

Successful dyeing depends on the porosity of shells. Some, such as dog whelks, are extremely hard and will

absorb hardly any water. Others, like mother-of-pearl, will absorb a great deal.

Dissolve hot water fabric dye in a pint of water in an old pan and simmer the shells in it for about six hours, topping up with water from time to time and checking every now and then to see if the colour of the shells is to your liking.

If for any reason a shell will not take a proprietary dye, make up natural dyes with madder essence (red), turmeric (yellow), indigo (blue) or buckthorn berries (green), and boil the shells in this.

Display

Large stripped shells can be displayed in boxes lined with dark coloured velvet. A stand of dark wood such as mahogany, oiled and coated with furniture polish, makes a good setting for a free-standing shell. It can be made of two pieces of wood glued and pinned together at right angles, with the shell resting in the interior. Two of these would make very attractive book ends.

To fix the shell permanently to such a wood mount, drill a hole in the base of the shell and cement into the hole a short aluminium or copper rod with Araldite. Drill a corresponding hole in the centre of the wooden base and glue the other end of the rod into it with wood glue.

Fragile shells should be stripped manually using an alabaster knife.



Creative ideas 94

Cookie cutter holder

Since the introduction of the original gingerbread man in the 18th century, biscuit cutting has come a long way. Cookie cutters can now be bought in many sizes and shapes - tract or otherwise.

Cookie cutters are needless bulky when stored in a drawer and tend to take up valuable space in the kitchen. Here is an item which is great fun to make

and the result is a different and practical way to keep cutters.

Arrange the cutters on a flat surface to find out how large an area they will cover. Construct a simple softwood frame of a suitable size with butt joints and attach this to a background piece of plywood with wood-working adhesive or panel pins (see Carpentry chapter 4, page 236).

Paint both background and frame with undercoat and then with gloss paints. Allowing each colour to dry before adding the next, colour in a vivid blue sky, bright green hills and what-

ever else you wish to add. Leave paint to dry thoroughly.

In pencil lightly trace around each cutter on the background keeping to your arrangement. Paint each shape in a different colour with gloss paint. Allow to dry.

Hammer small tacks (from which the cutters will hang) into plywood at the top of each painted shape.

Cut a strip of plywood for the lower foreground. With a coping saw shape the top edge (see Carpentry chapter 8, page 548). Paint with undercoat and gloss paint. When dry, fit the plywood

and stick in place across front of frame with wood-working adhesive or attach with nails. Similarly, cut out, paint and attach a piece of plywood resembling a tree to the side of the frame. Both these foreground shapes will give a three-dimensional effect.

Mount the completed holder on the wall by inserting two hooks or staples in the back of the frame and securely attaching a length of picture hanging wire.

The background in this cookie cutter picture can be adjusted to suit different shapes. By Neil Lorimer.



Making dried fantasy flowers



As well as being used in their conventional state dried flowers can be taken to pieces and their seeds, cases, leaves, petals or stems re-made into a whole wealth of imaginary shapes, sometimes known as fantasy flowers.

Making flowers

The art of making fantasy flowers is based on using the natural formation of a flower. Most flowers are formed on the same basis—a seed in the centre of

one or more petals. Provided that formula is adhered to when creating fantasy flowers there are enormous possibilities open to you.

There are three methods of making fantasy flowers: firstly by sticking petals between the scales in a composite seed head such as a fir cone; secondly by binding petals round one or more seeds; thirdly by threading a single seed through the centre of a suitable petal shape.

Collecting material

The material collected should consist of those parts that form the 'centre' of the fantasy flower and those that form the 'petals'.

Centres. Composite seed heads with scales in which to anchor the petals make a good starting point. Any kind of fir cone is useful because of its many horizontal scales. Fluffy seed heads such as teasles (*dipsaceus fullonum*) and hare's tail grasses (*lagurus ovatus*) are suitable and allow petals to be fixed at any angle.

For centres where a bunch of small flowers or seed heads are to be assembled to form stamens choose straight, uncluttered stems with a positive shape on top like allium seeds

Below: fantasy flowers can be both unusual and individual when created to your own design. These skeleton magnolia leaves make delightful and ethereal flowers.





Steve Becknell

or glixia (*syngonanthus elegans*). There are many helichrysums which look as though they should be suitable, but their floppy stems are difficult to work with. However they can be bunched together as a massed centre well down inside a flower.

Very fluffy heads, particularly pampas grass, are not suitable as the lack of definite shape tends to confuse the overall flower shape.

It is very often the case that during the process of drying there is a considerable reduction in size of the material. This results in a delicate shape which when made into fantasy flowers will add variety to any dried flower decoration.

'Petals'. Being essentially flat most small dried leaves such as butcher's broom (*ruscus aculeatus*), eucalyptus and skeleton magnolia leaves are suitable.

Select similar sized material to create a regularly shaped flower. If dried leaves have become crumpled they can be lightly ironed.

The scales from fir cones, if they can be removed intact, make petals when glued into other seed heads. Grasses such as oats (*avena*) and barley (*hordeum secalinum*) can be pulled apart and the components individually used in a similar way to cone scales.

One of the best seed heads for a wide variety of uses is the globe artichoke (*cynara scolymus*) the centre of which, after it has been dried for some time, explodes like a great powder puff. Amongst this profusion are the seeds, each with its own parachute. The seeds fall away and the parachutes can be glued between scales of a fir cone.

Close up the parachutes and invert them and they can be wired as tiny petals round a *Verbascum* seed or simply assembled into bunches on a long stem like wheat (*triticum*). Drying flowers is described in Flowers and plants chapters 5 and 6, pages 584 and 610.

Design

Grasses and seed heads used in their natural state make useful accompaniments to fantasy flower arrangements. Their simple lines show off the more elaborate fantasy shapes.

A fantasy flower design can imitate that of the conventional dried or fresh flower arrangement or alternatively can be turned into something more abstract.

When deciding on a combination of shapes to make consider also a contrast in texture—fluffy and wooden material. Entirely round arrangements should be avoided, not only are they hard to

A dried globe artichoke (left) and an exploded globe artichoke (right).

produce accurately but they also make for a rather uninteresting design. A good idea is to assemble some simple material into sprays to give a linear effect to any design.

Fanciful magnolias

Several of these fanciful flowers could be arranged on a branch as shown in the photograph opposite. Skeleton magnolia leaves can sometimes be bought or they can be made as described in Flowers and plants chapter 14, page 2472.

You will need:

Glixia.

Dyed skeleton magnolia leaves.

Stem and binding wires.

Stem binding tape.

For each flower, arrange a bunch of glixia of varying lengths and bind it to the top of a stem wire.

Add the skeleton magnolia leaves individually arranging them so that they are evenly spaced around the centre.

Cover the base of the leaves and form stems with stem binding tape.

Each flower can be attached to the branch by simply twisting the wire stem around it.

Individual flowers

Though very natural looking in a rural setting, the flowers illustrated (right) are in fact fantasy flowers and are made by combining elements from several flowers and plants. Such flowers make interesting additions to dried flower arrangements and decorations.

Colour. To give more colour to the finished flower the component parts can be dyed before assembly (Flowers and plants 7, page 1170).

The fantasy teazle flower, on the left in the picture, is simple to make. The glixia have been dyed bright orange.

You will need:

1 teazle on a stem (*dipsaceus fullonum*)

1 glixia (*syngonanthus elegans*)

1 spruce cone scales

Glue such as UHU.

With a tiny dab of glue stick the glixia around the peak of the teazle.

Further down the teazle stick in the spruce cone scales.

The fir cone flower, right foreground of the picture, has artichoke scales as petals glued into the central fir cone.

You will need:

1 fir cone.

5 artichoke scales.

Glue such as Uhu.

Stem wire, stem binding tape

Cover the stem wire with binding tape and attach it round the base of the fir cone by winding it round.

With a tiny dab of glue stick the artichoke scales round base of cone

Other simple flowers

Using a verbascum seed as the centre of the flower, bind it to the wire stem. At the same time bind in inverted artichoke seeds (far right of picture). Another simple idea is to stick dried melon pips into a head of hare's tail grass seeds (left foreground). Couch grass, when bunched and bound on to a wire stem, makes a fantasy thistle (centre back of picture).

Autumn flowers

Much of the dried plant material bought in shops has been dyed. However the shades which emerge from naturally dried material are both subtle and beautiful as shown below.

You will need:

1 artichoke fully blown (*cynara scolymus*).

2 closed artichokes (*cynara scolymus*).

7 fir cones.

1 stem of couch grass (*agropyron repens*).

1 allium head.

1 head of *sedum spectabile*.

1 cedar cone fully blown.

The three 'roses' are made by gluing the seeds which lie inside the scales of the cedar cone in between the scales of three fir cones.

Fill one cone with artichoke seeds. Two other cones have artichoke scales encircling them.

The last cone is used for the thin scales which are bound to the stem below the cone.

The compound head consists of pieces of couch grass (*agropyron repens*) each bound individually to a stem, then the pieces are assembled on to one stem. These parts, together with the two closed artichokes and allium, go to fill the central area.

The shape is extended with six sprays of allium seeds which have been bound to wire stems. Three stems of inverted artichoke seeds emphasize the line while seven bunches of artichoke seeds complete the design. There are many more ideas that can be worked out by yourself—experimentation and knowing the material you have available are essential for a good design.

Right: make a varied stock of fantasy flowers as they will last indefinitely.

Below: a fantasy flower wall decoration using natural autumnal colours.





Introduction to wood turning

Wood – carpentry 32



Marshall Cavendish

A wood turning-lathe is a machine used for shaping wood. A piece of wood is attached to either one or two points on the machine, depending on what sort of shape is required. The wood is then rotated at great speed and a cutting tool, held against the spinning wood, is used to cut it to the desired shape.

Learning to turn wood on a lathe is an exciting prospect to any carpenter. It enables you to move beyond working with angular shapes to create rounded and curved objects. However, the beginner must realize the difficulties and dangers involved.

Wood turning entails the use of a variety of cutting tools, each suited for, and handled according to, the particular job. One is also dealing with a fast spinning block of wood which can, if secured carelessly or cut badly,

A drill-driven lathe with a workpiece attached ready for turning between the two centres.

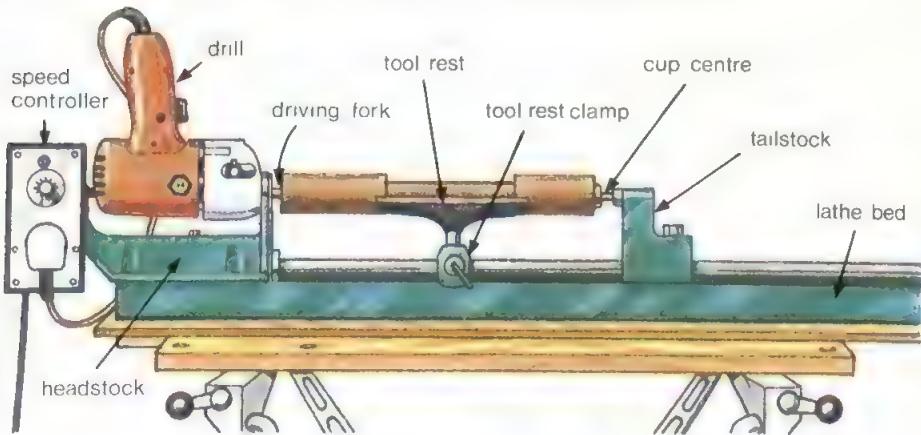
come loose and cause considerable damage.

But, like most skills, with guidance and practice, wood turning is possible to master. Those readers who wish to practise it are advised to join a class which offers individual tuition and facilities. This chapter serves as an introduction to the craft.

There are basically two types of turning procedures: turning between centres (sometimes referred to as spindle work) and faceplate turning.

Turning between centres refers to

1. Diagram showing the main features of a drill-driven lathe.



the process in which lengths of wood are clamped between two points on the lathe and spin on a central line between these points. Chair legs, lamp stands, candlestick holders or salt and pepper pots can be turned in this way.

Faceplate turning is used to produce wide, flat objects, such as bowls, dishes or lamp stands. With this method the wood to be turned is fastened at only one point on the lathe.

The lathe

Turning-lathes are available in a range of sizes. Drill-driven lathes like the one shown left, are made to fit all makes of power drill but must only be used for light work. Heavier jobs require a purpose-built lathe which is shown right. Both types of lathe are designed in much the same way. The illustration (fig.1) lists the main features of a lathe. Drill-driven lathes should be fitted with a variable speed controller. Some speed controllers reduce the speed of the drill simply by cutting the voltage and power. Be sure to buy one which reduces speed but maintains almost full power under a load.

The lathe bed is the frame to which the lathe components are fitted. The size of the bed limits the size of the wood that can be turned between centres.

The headstock, situated at the left-hand side of the lathe, contains a revolving mandril—i.e an axis on which the wood is fixed while being turned. In faceplate turning the object is fastened to the headstock. When turning between centres the wood is fastened to the headstock and tailstock.

The tailstock is placed at the right-hand side of the lathe bed. It can be adjusted along the length of the bed to suit the length of the workpiece.

The tool rest is placed on the near side of the lathe bed. The tools for shaping the wood are supported on the rest while the workpiece is being turned. The position of the tool rest can be adjusted to suit the type of work being done.

Lathe speeds. The speed with which the wood revolves on the lathe can be adjusted depending on the particular turning job and the diameter of the workpiece.

The wider the workpiece, the faster its speed (measured in millimetres or inches per second) at the outside edge for any given lathe speed (measured in revolutions per minute—rpm). Thus, for most operations, the smaller the piece, the faster the lathe speed should be set. Sanding, burnishing and the final parting-off are done at a slower

Right: a purpose-built lathe is an essential piece of equipment in the professional carpenter's workshop.



speed. Parting-off refers to the incision, made with the parting tool, at each end of the workpiece indicating where it is to be cut off.

Lathe tools

Special cutting tools are used for lathe work. These can be grouped under two headings: those with a cutting action and those with a scraping action.

Note: though lathe tools resemble ordinary bench chisels they are different. Bench chisels must never be used for lathework.

Cutting tools. There are three types of tool used for cutting: gouges, chisels and the parting chisel.

Gouges are used for 'roughing'—ie cutting the basic shape of the article. A gouge, ground square across, is used on spindle work and to cut the convex shape on the outsides of bowls. A round-nosed gouge is used mainly for hollowing out work, such as on the insides of bowls. Chisels are used to obtain a straight smooth surface or,

with some expertise, the convex surfaces of bowls. They can be either straight edged or skew.

The parting chisel is used for cutting deeply into the wood, especially on spindle work.

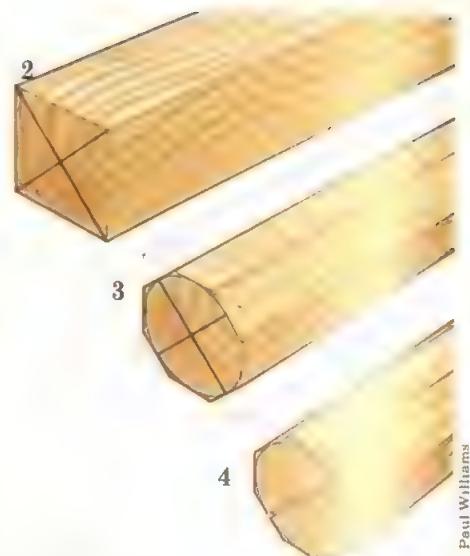
Scrapers. These come in a wide variety of shapes and sizes and are used mainly for finishing work.

Turning between centres

This method is used to turn lengths of wood. The wood to be turned should be about 50mm (2") longer than the finished object to allow for waste at either end.

When choosing wood, keep in mind that hardwoods usually give a better finish than softwoods. Select a piece with a straight, even grain and find the centre at each end by marking in the diagonals (fig.2).

Cutting tools used for lathework. They are suitable for working between centres and for faceplate turning.



2. *Mark in diagonals at both ends of workpiece to find the centre.*

3. *Centre of circle lies where diagonals meet. Waste planed down to tangents.*

4. *Centre hole marked with punch and saw cut made to take mandrel.*

Scribe a circle from the point where the diagonals intersect (fig.3). Tangents to the circle are marked off across the corners and the corners removed along the whole length of the wood with a plane (see fig.3). With a nail punch, mark the centre at either end and make a shallow saw cut across one end to take the mandrel on the headstock (fig.4).

At the other end of the piece of wood apply a small amount of grease or oil to the centre hole in the wood.

Adjust the tailstock so that it holds the wood firmly. Position the tool rest as close to the wood as possible, just above the centre of the workpiece. Work from left to right unless left-handed. Hold the handle of the turning tool firmly against your hip with one hand while pressing the blade down firmly on the tool rest with the other. Slowly move the blade against the turning wood.

Faceplate turning

This method is used mainly to turn bowls or lamp bases. The outside of the bowl is usually turned first, the bowl reversed and the inside hollowed out. This causes problems with re-centring the wood. The problem can be eliminated if a faceplate slightly smaller than the intended base of the bowl is used.

If the workpiece is thicker than 50mm (2") the faceplate can be screwed directly to it. If thinner wood is used a piece of softwood, 12mm (½") thick, is cut to the exact size of the faceplate and then screwed to it. The wood to be turned is then glued to the softwood with PVA adhesive with a piece of



paper in between. The finished piece is simply knocked off with a mallet, splitting the paper lining. The surface is then cleaned.

The grain of the wood must be set at right angles to that of the workpiece. The workpiece is centred using a similar method to that used on turning between centres.

A small hollow in the centre of the bowl is cut first and then enlarged until the basic shape is made.

Keep checking the depth of the hollow to ensure the faceplate is not struck.

Finishing

Some turned pieces may need sanding. To do this set the lathe at a fast speed

and using a grade 80 aluminium oxide (silicon carbide) paper apply it evenly to the workpiece. Finish off with a grade 180 paper.

Depending on the intended use of the piece, it can be finished with polyurethane varnish, wax or oil. Apply it while the piece is still on the lathe. When the finish is dry, remove the piece, saw off the waste and smooth the ends with a disc sander. The finish is then applied to the ends.

These turned platters and salt and pepper pots are fine examples of both faceplate turning and turning between centres. The completed platters have been lightly oiled for a matt finish.

Safety precautions

Never wear loose clothing when working with a lathe as it might get caught in the machinery.

Make sure the off switch of the lathe is easily reached with one hand while the machine is being operated.

Do not allow people to stand too close when turning as they might be injured by flying chips.

Always check that the workpiece is fixed securely to the lathe and that the lathe is firm and secure.

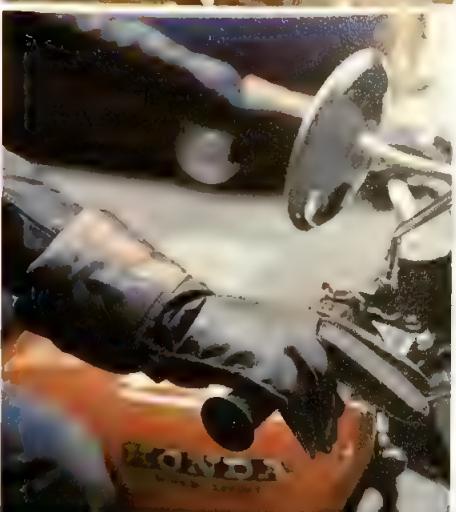
Goggles should be worn while turning, to protect your eyes from flying chips.



Stitched gloves

In this chapter the materials, tools and techniques for making leather gloves are discussed. These same techniques can be used for making many different types of glove—fashion accessory, gardening gloves, driving gloves, etc.

Many types of glove for different occasions can be made using the same basic pattern. Instructions for using a glove pattern are given in this chapter.



Gloving leather

Gloving leather comes from the skins of sheep, goats and pigs and is specially treated to make it extremely soft and supple. The finest varieties—kid, for example—are used for fashion gloves while the heavier types such as basil (a sheepskin split) are used for gardening gloves.

Buy a skin of weight to suit the type of glove you want to make. It is better to go to a supplier who specializes in gloving leather and who will be able to advise you on the type of leather to buy.

Inspect the skin for holes and blemishes before you buy and make sure it has some 'give' in it.

For your first pair of gloves use a skin that is easy to work with such as a light-weight cape.

Before the pattern can be cut out, the skin must be stretched. This is to ensure a comfortable fit. First the skin is folded in half right sides together and then rolled up in a damp cloth and left for about ten minutes. The skin is then removed and stretched lengthways and sideways as much as possible. Dampening the leather makes it stretch more evenly.

The pattern

A glove pattern (fig.1) consists of eight pieces—the main part of the glove comprising the palm, back and fingers called the trunk; the pieces that go between the fingers called the fourchettes (three pairs); and the thumb. The three lines of decorative stitching on the trunk are called the points.

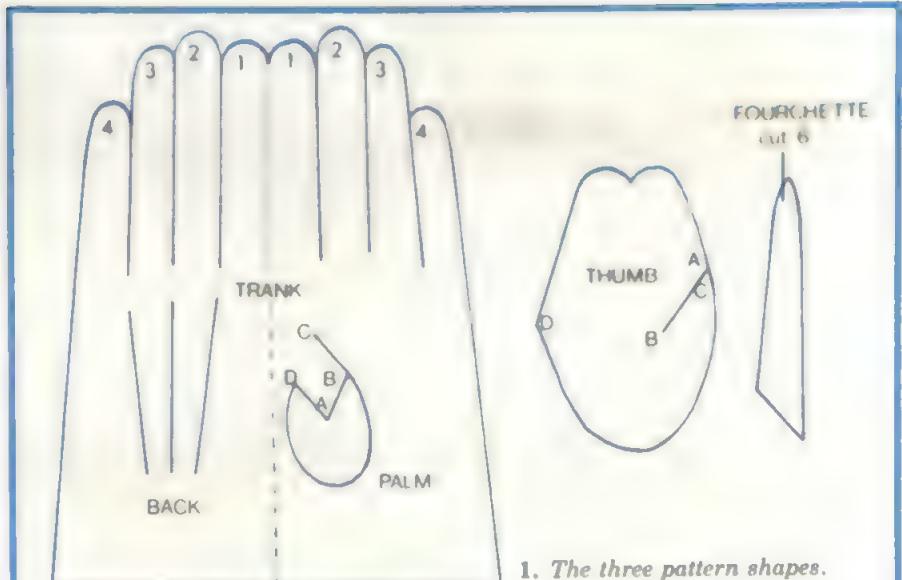
Patterns can be obtained from suppliers of gloving leather. To find out your size, measure the widest part of your hand with a gloving tape measure.

Arranging the pattern

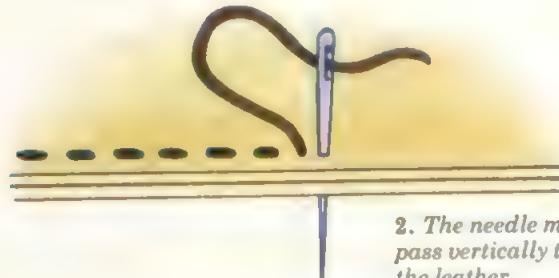
The first thing to do is inspect the skin for blemishes and mark these on the back of the skin with soft pencil. Then cut out another set of shapes for the other hand and arrange both sets on the skin avoiding the blemishes.

Marking the pattern

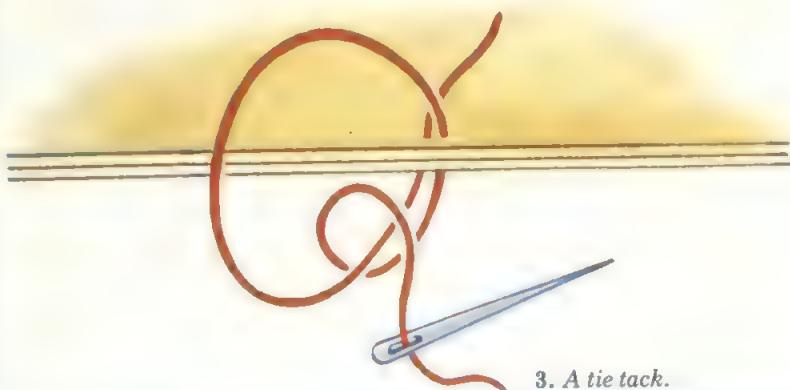
When all the pieces have been arranged they can be marked out on the skin. This can be done by drawing round each piece with a soft pointed pencil. If drawing lines tends to stretch the skin and pull it out of shape the pattern can be marked with dots. Weigh the pieces down with a paper-weight while you mark them out. So that the base of the fingers and the position of the points can be marked, punch holes in the pattern and make dots through the pattern on to the skin underneath. Mark three fourchettes and then turn the pattern over and mark three more. This makes three pairs.



1. The three pattern shapes.



2. The needle must pass vertically through the leather.



3. A tie tack.

Cutting out

The pieces should be cut out with a sharp pair of scissors. Cut just inside the line (or dots) so that they do not appear on the pieces. Do not cut between the fingers at this stage. If you do you will find that they tangle round the sewing thread and get pulled out of shape.

Stitching

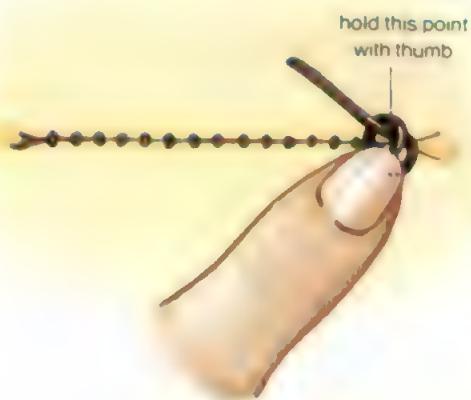
Light-weight fashion gloves should be stitched with a small, pointed needle such as a betweens needle, heavier types should be stitched with a glover. The thread used should be of a suitable weight and colour according to the weight and colour of the leather.

Stab-stitch is used for making leather gloves. This resembles a running stitch but the needle must pass vertically rather than horizontally through the leather (fig.2).

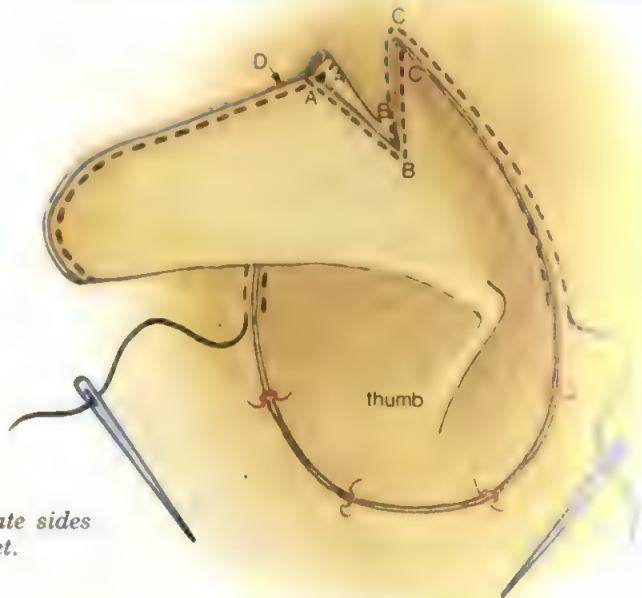
Normally the edges to be stitched are placed wrong sides together and the stitching done on the right side, about 1mm ($\frac{1}{16}$) from the edge.

Before beginning to stitch, the two edges are held together with tie tacks (fig.3) at 1.3cm ($\frac{1}{2}$) intervals.

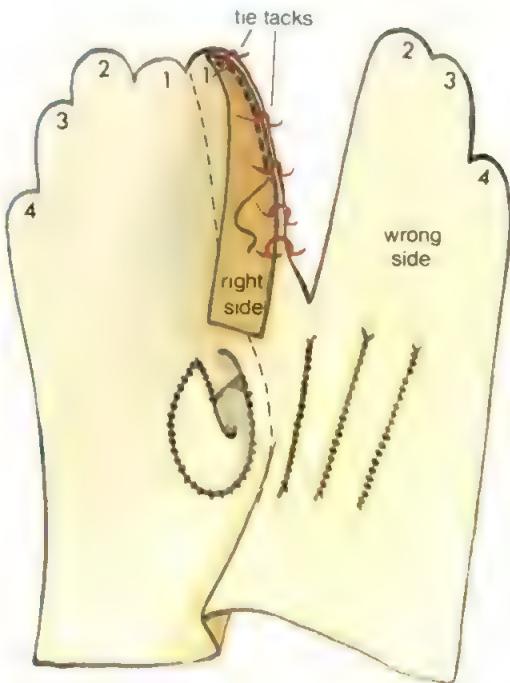
The length of the stitches should be the same on each side, but will vary according to the type of glove being made. A stitch of about 1mm ($\frac{1}{16}$) is suitable for a glove made in light-weight leather.



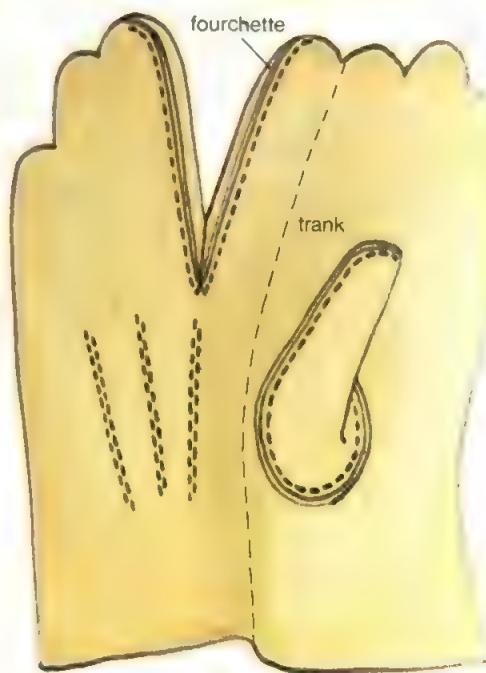
4. A glover's knot.



5. Stitch on alternate sides until the needles meet.



6. Start stitching fourchette at tip of finger.



7. Sew ends of fourchettes together.

The gloves

Here are instructions for assembling a basic glove pattern.

You will need:

Skin of light-weight cape about 1sq m (3½sq ft).

Two pairs of scissors—one large, one small.

Three thin needles such as betweens No.7.

Steel rule.

Commercial glove pattern of your size.

Piece of card.

Coloured mercerized thread such as Sylko for tie tacks.

Strong cotton thread such as Kerr's No.24 lustre thread or buttonhole

twist for stab-stitching.

Beeswax.

Thimble.

Sharp soft pencil.

□ Stretch the skin as described earlier, especially the area from which the fourchettes are to be cut.

□ Cut out a second set of pattern pieces from the piece of card—this will make it easier to arrange the pattern on the skin for the other hand.

□ Check the grain side of the skin for blemishes and mark them on the back of the skin.

□ Place the skin grain side down on a flat surface and arrange the pattern pieces.

□ Using the sharp pencil mark round the pattern pieces as described earlier.

□ Remove the pattern pieces and draw lines between the fingers.

□ Cut out the pieces using the large scissors.

The trunk

First of all the three lines of decorative stitching (the points) are made.

□ Put pins in the top and bottom dot of the middle point from the outside to the inside.

□ Fold the leather wrong sides together from pin to pin and make a crease.

□ Thread a needle with the strong cotton thread and knot one end.

Run the thread through beeswax to prevent tangling.

With the knot on the inside, stab-stitch along the crease about 1mm ($\frac{1}{8}$ ") from the edge. Do not pull the thread too tight as this will cause the stitching to buckle.

When you reach the other end pull the thread through to the inside and make a glover's knot (fig.4).

Stitch the other five points in the same way.

The thumb is next inserted into the trunk.

Take one trunk and its matching thumb piece.

Put the trunk and the thumb face up on your surface with points A together (fig.5).

Secure these points together with a tie tack.

Secure point B (see figs.1 and 5) to point B with another tie tack.

Tie tack from point A to point B and then stab-stitch.

The thumb must overlap the trunk at point B to conceal the sharp corner on the trunk. All sharp corners must be concealed in this way.

Stab-stitch to point C and tuck the corner on the thumb underneath the trunk.

Stab-stitch half way down the side of the thumb and leave the needle on the thread.

Tie tack from the tip of the thumb, down the side and past point D and round the base of the thumb.

Using another needle stab-stitch from the tip of the thumb until you reach a point on the other side of the thumb level with the other needle (fig.5).

Stab-stitch on alternate sides until the needles meet and finish off the threads on the inside.

Insert other thumb in the same way.

The fourchettes are now attached to the fingers on the back part of the glove.

Cut along the line between the first and second fingers on the back of the glove where the fourchette is to be attached.

Do not cut between the fingers on the palm side yet.

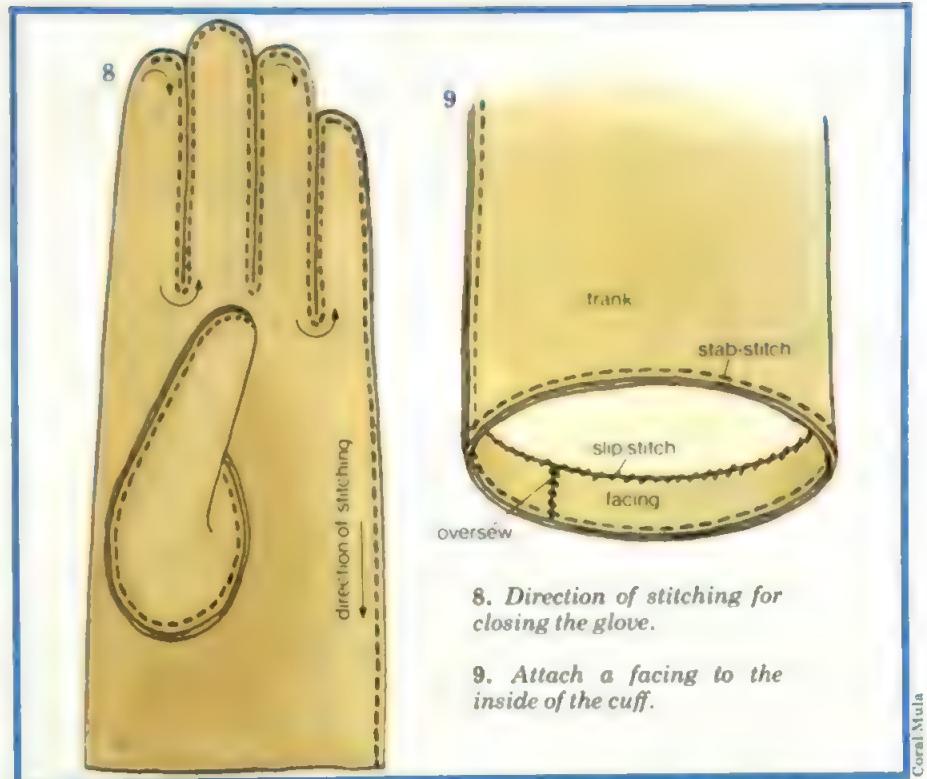
Place a fourchette on to the first finger, wrong sides together and tie tack from the tip down to the base (fig.6) of the finger.

Do the same with the other fourchette on the second finger.

Tie tack and stab-stitch from the tip of the second finger to the base.

Cut off the excess of fourchettes at the base of the fingers and oversew the ends together, right sides facing (fig.7).

Attach the other fourchettes of both hands. Make sure that the fourchettes on the second and third fingers of each hand meet at a point. Fig.7 shows the inserted fourchettes.



8. Direction of stitching for closing the glove.

9. Attach a facing to the inside of the cuff.



Closing. When all the fourchettes are in place the glove can be 'closed' ie the palm is folded over on the back, wrong sides together and stitched round all the fingers up the side (fig.8).

First of all cut between the first and second fingers on the palm side and tie tack the first and second fingers to the fourchette on the back of the glove.

Stab-stitch from the tip of the first finger, down between the first and second fingers.

Then cut between the second and third fingers and attach to the next fourchette in the same way.

Conceal the pointed ends of the fourchettes under the fingers.

Continue stitching round the fingers

One line of points (the row of stitching on the back) decorates these hand-stitched gloves.

in this way, cutting down between each one as you go.

When you reach the fourth finger, stitch over the tip and down the side.

Facing. To finish off the gloves a facing is attached to the inside of cuff (fig.9).

Cut a strip of leather about 25cm (10") long and 1.3cm ($\frac{1}{2}$ ") wide.

With wrong sides together stab-stitch the facing to the cuff (see fig.9).

Cut the facing to the correct length and oversew the ends together.

Press the gloves between blotting paper for a few days.

Piercing and threading shells

Shellcraft 6



A cowrie shell necklace next to an elegant composite design of scallop pendant and whale's teeth on sequin chain.
By Helga.



String of subtly coloured nerites.

Left:
pearls
pre-
abu-

Right:
coral
combined with
pearl and tusk
shells

Necklaces above are
moon snails with pearl
spacers and a string of
dove shells.



Piercing

It is very easy to pierce shells with a drill. Most shell drilling for bead making is carried out by part-time women workers in a suburb of Naples. These 'bucatrice', or 'bow drill women' use an archimedean drill, which you can buy from jewellers' supply merchants. It looks like a bow and arrow, with the bow cord twisted round the arrow and the shaft holding the drill. This bow can be worked with one hand while holding the shell in the other. The 'bucatrice' work with their coral or shells held in a hand vice fixed to the bench. They are considered to have a much lighter touch with the drill than any male craftsman.

Small shells, so long as they are not too brittle, can be held between the jaws of a vice to which leather has been stuck. Large shells can be stuck down with lapidary cement, as described in Shellcraft chapter 5, page 2630. The manner of piercing a shell will depend on the way in which it will lie best in the necklace or other pieces of jewelry or decoration for which it is intended.

Where to drill shells

Generally speaking, the mouth of the shell should always lie on a string so that it is hidden while the jewelry is being worn. A cone-shaped shell is often best drilled along its long axis, from the point of the spire out through the mouth.

Always begin piercing a hole in a shell by making a pilot hole. This is done by

Chokers made from scallop shells.

twirling a sharp steel tool so as to give the drill some purchase when it begins to bite. It may even be necessary to flatten part of the surface of a shell in an unobtrusive way by rubbing it with a small file before beginning this hole. To pierce a shell take a good quality steel drill bit of about 1mm ($\frac{1}{16}$) in thickness (thinner bits can be used but they have a tendency to break). Put the bit in a hand twist drill and drill gently in the hole already formed in the surface of the shell. Go slowly, concentrating on neatness rather than speed.

You can tell by the feel of the drill under your hand when the drill bit has passed through the outer wall of the shell. Once you have gone right through the shell, withdraw slowly, twisting as you go.

Once you have pierced enough shells to make a necklace or other piece of jewelry, arrange them in a row to see how they look. Decide where every individual shell in your collection will show up to best advantage.

Large shells, particularly stripped ones, are very suitable for pendants. They do not need to be pierced because they can be suspended simply by cementing to the tip of the cone of the shell a jeweller's finding, called a 'bellcap'. This is then attached by means of another finding called a 'jump ring' to a chain. Bracelets can have shells attached by this method, and so can earrings.

Making spacers

Shell jewelry often looks better when the shells are separated by spacers, which can be of turned ivory, wooden beads, nuts or seeds, or mother-of-pearl. Pieces of mother-of-pearl can be turned on a lathe or made by cutting oblongs of pearl shell 2.5cm (1") long by 6mm ($\frac{1}{4}$) wide.

□ Make up two square wooden boards, about 30cm x 30cm (12" x 12") and fix a handle to one of them. Cover one side of each board with wood glue and stick down very coarse sandpaper

□ Now place the oblongs of mother-of-pearl on top of the sanded side of the bottom board, cover it with the board with the handle attached, and rub the two boards together. It helps if all the oblongs are pointing in the same direction and if you rub the boards at right angles to the long axis of the oblong. Gradually, the oblongs will lose their sharp edges and become cylindrical. If some oblongs are hard to smooth, round their edges with a sharp steel file, then sand with medium and then fine sandpaper.

□ Drill through the finished oblongs (which are called 'bangles') along their axis. Drill from both ends and let the holes meet in the middle.

Square pieces of mother-of-pearl can be converted into round spacers by moving the two boards in a circular direction as you rub.

Stringing

String shells on nylon thread, or on a fishing line which can be purchased cheaply in bobbins. It is virtually unbreakable and so stiff that it can be pushed through the shell holes without a needle. You may need a needle, however, to fasten the thread to the clip at the back of the neck. To make a needle, glue one end of the thread to a short length of fuse wire with contact adhesive. Use the fuse wire as a needle to pull the thread through the shells. The professional way of stringing beads is to use two needles and two threads and to tie a knot behind every bead so as to keep it in its right place. Even if one thread only is used, it should still be knotted.

Mounting large shells

Fasten large shells on a bench with lapidary cement and drill with a small masonry drill bit lubricated with a little oil. Take care not to pierce the wall of the shell and go inside the cavity. The mountings of shells intended for everyday use (to hold sweets or salt for example) should be such that the whole thing can be washed easily. The simplest way of mounting a very large shell so that it will stand upright with the mouth upwards, is to grind the base flat. Another simple way of



Michael Boys

mounting is to drill holes in the cone and insert short sections of silver rod to enable the shell to stand upright.

To fit a shell to a base or on to feet of ivory, drill a hole in the shell, cement short rods of aluminium or copper into the holes with epoxy adhesive, drill identically sized holes in the base which will correspond with the rods and stick the whole thing together with epoxy adhesive.

Making a shell curtain

Choose shells of the same type, in graduated sizes. Scallop-shaped, flat shells are the best, as they will lie flat after threading.

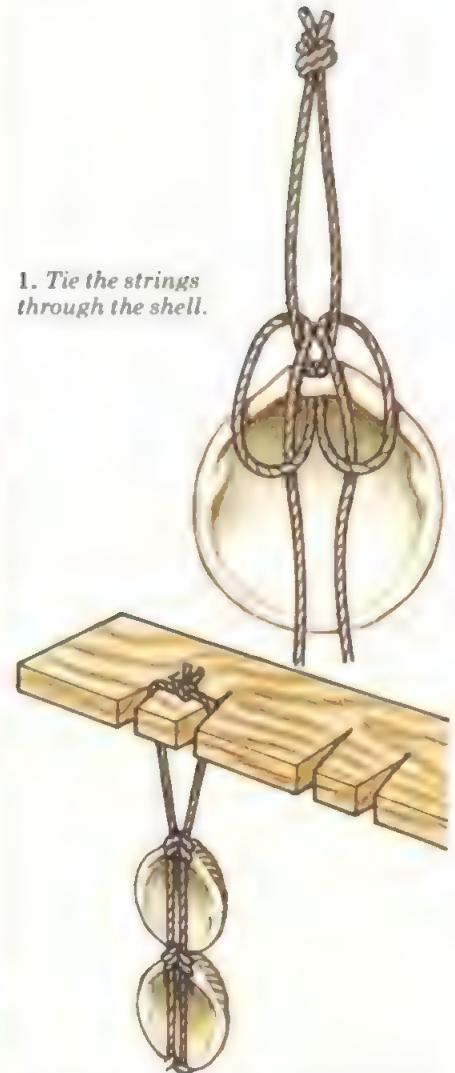
- Drill holes at the base of the shells.
- Decide on the depth of the curtain and lay the shells out in lines, each line decreasing in size until it reaches the bottom.
- Cut two equal lengths of firm string the depth of the final curtain plus half again to allow for knotting and finishing. Knot the two strings together at the top, allowing about 5cm (2") spare above the knot.

Chains of flat scallop shells used to construct a novel curtain.



Joining the shells.

1. Tie the strings through the shell.



2. Attach strings to a notched batten.

Thread both strings through the hole of the biggest shell in the line. Pick up one end of one string and make a loop by passing over the top of the shell, behind the string and tying a simple knot (fig.1).

Repeat the process with the other string and pull both knots tightly so that they are equal. Then thread the next shell and knot that, taking care that this shell is butting up tightly to the next. Continue in this way until you reach the end of one line of shells. Make a double knot at the last shell and tuck in the ends of string.

To fix the strings of shells to a batten, take a piece of softwood the width of your window and cut two notches in it for each pair of strings. Slip the strings separately into the notches and knot each pair of strings together behind the wood (fig.2). Fix the batten to the window frame. If the shells have been knotted correctly they will all hang straight, facing in the same direction, and there will be no need to fix the bottom of the shell curtain.

Michael Boys

Paul Williams

Fringing and design techniques

Beadwork 18



Bead weaving is generally associated with the American Indians who have been practising this craft since the mid 16th century. The Indians used bead weaving to make necklaces and other ornaments as well as beaded ceremonial

costume. They made their own beads from stones, shells and seeds, but it was not until the European traders introduced glass beads that the craft as we know it began. Ceramic and metal beads were also used, but glass was

more popular among the Indians. The colours and shapes of beads introduced by the traders determined the character of Indian bead weaving. Small round glass beads in white and blue seem to have been the most common while other primary colours were introduced later.

Different tribes developed their own styles and motifs in weaving, usually with symbolic significance. The Indians of the plains, the Sioux, for example, favoured geometric patterns triangles, diamonds and rectangles. These were usually done in predominantly

An example of side fringing designed by Marjorie Murphy.



white and blue beads with a smaller quantity of red, black or other primary colours.

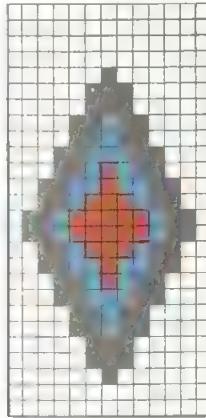
Designing a pattern

The patterns used by the American Indians can be adapted for bead weaving today. Once you have got the hang of the bead weaving technique, however, it is fun to make up your own. Designing a pattern for bead weaving can be done on graph paper—each square representing one bead. This will give you some idea of the finished pattern. As spherical beads are not usually quite as long as they are wide, however, the pattern will become elongated as you weave.

Bead weaving really calls for geometric patterns, as used by the Indians, although it is possible to make floral designs with curved lines as on the neck trim shown overleaf.

Horizontal and vertical lines present no problem when designing a pattern but diagonal lines have to be stepped on each row by one or more beads depending on how gradual the diagonal is to be.

When making a pattern, colour each square according to the coloured bead to be used and slowly build up the pattern remembering that the design will become elongated when woven on a loom. To start with, make a simple geometric repeat pattern such as the example given in fig.1. A rich source of



1. A simple bead weaving pattern set out on graph paper.

inspiration for bead weaving patterns could come from patterns for cross stitch embroidery which are also worked out on graph paper. Remember that the width of each piece is limited to the number of beads the loom can accommodate but each piece can be as long as 1.5m (5').

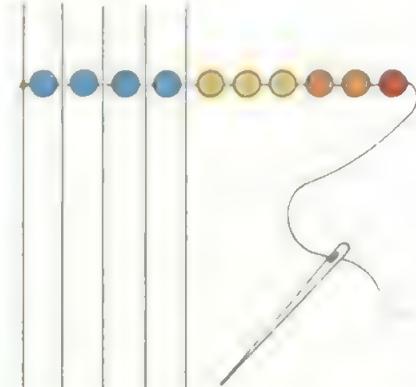
Some people find it much easier to work from a written pattern rather than a coloured chart. When you have designed a pattern you like, you may find it easier and quicker to write the pattern row by row and work from that.



Detail of a ceremonial sash of the Chippewa tribe of North America.

Fringing

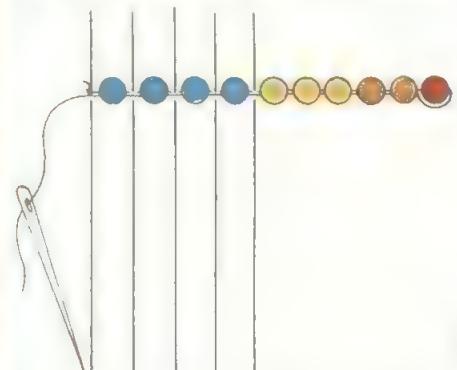
You may like to include fringing on your pattern. End fringing is dealt with in Beadwork chapter 12, page 2590. Another type of fringing—side fringing—is worked on a loom. The fringe comes off the side rather than the end of the beadwork as each fringe is



2. Thread the required number of beads, including those for the fringe, on to the weft thread.

attached to the weft.

The fringe is actually attached to the beadwork as the weaving progresses, and not after the piece is finished.



3. Pass the needle back through beads.

The appropriate number of beads for one row is threaded on to the weft thread in the usual way, and then an extra number of beads—six, for example—is threaded on as well (fig.2). The needle is then passed back through all but the last of the extra six beads threaded, and then the beads for that row are attached to the warp thread in the usual way (fig.3), thereby creating one side fringe.

Patterns can be included into the fringing just as they can on the bead weaving, and the lengths of the fringing rows can be varied to create an uneven or shaped edge as on the shelf fringe shown opposite.

Shelf fringe

You will need:

Bead loom and beading needle.

Strong thread such as Drima made by J & P Coats.



Jeanne

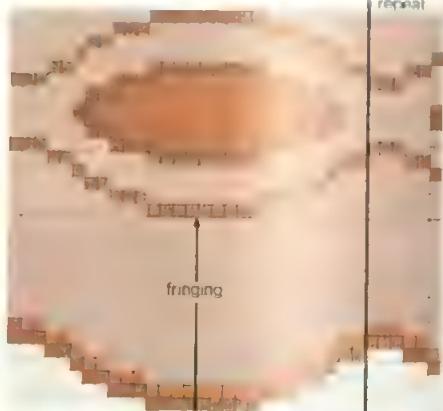
The neck trim, designed by Marjorie Murphy, is stitched to each side of the neck of this top. Style pattern no.1387.

Glass beads size 7 in the following colours:

Pearl, brown and orange—quantities depending on length of fringe.

Thread your loom with 17 warp threads. Add 45cm (18") to the required finished length.

Start bead weaving the repeat pattern shown in fig.4 following the instructions for side fringing explained earlier.



4. Weaving pattern for side fringe.

Neck trim

Here is the pattern for weaving the neck trim used on the denim top. A floral motif is used with curved rather than geometric lines. Notice how the curves have been created on the bead weaving pattern.

You will need:

Bead loom.

Strong thread such as Drima made by J & P Coats.

Beading needle.

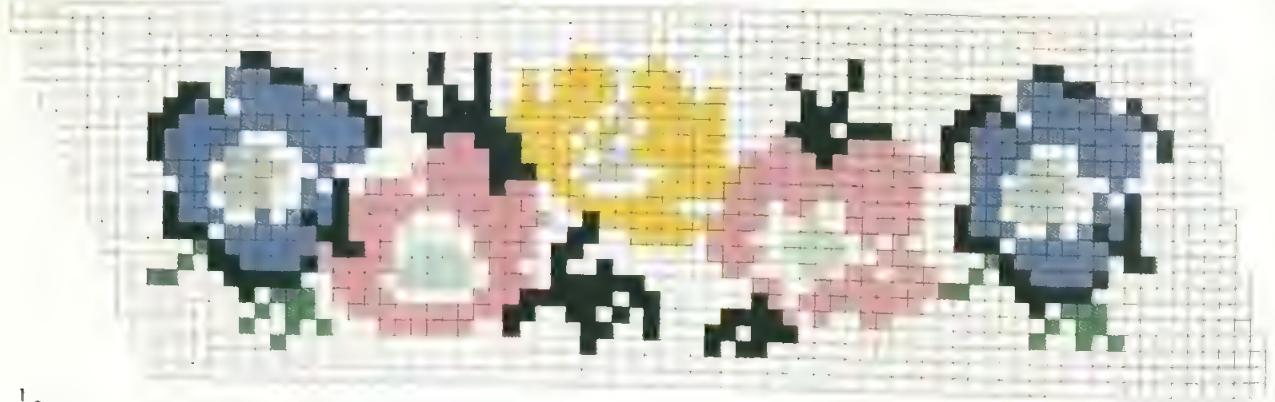
Beeswax.

Beads size 7, about 2mm ($\frac{3}{16}$ ") in diameter, in the following colours and amounts:

113gm (4oz) white.

28gm (1oz) pink.

5. Weaving pattern for the neck trim. The pattern will elongate when woven on a loom.



1 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 81

28cm (1oz) mid blue.

28cm (1oz) yellow.

11cm (1oz) dark green.

11cm (1oz) light green.

11cm (1oz) mid green.

1. **Lead a loom** following instructions in Beadwork chapter 12, page 25, with 25 warp threads each 65cm (26in) long.

2. **Lead a needle** with a long thread and **soak** the thread on beeswax to prevent tangling.

3. **Lead the thread** to the first warp thread on the left-hand side leaving a long tail (this will be threaded into the weft and trimmed off later when the bead weaving is complete).

4. **Start bead weaving** following the chart (fig.5).

When row 76 has been completed, pass the needle through the first four beads of that row and then weave row 77.

Continue decreasing in this way for rows 78 to 81.

To finish off. A selvedge can be woven at the end by weaving the weft thread

through the warp without attaching any beads. This selvedge can be turned in when the piece is attached to the garment.

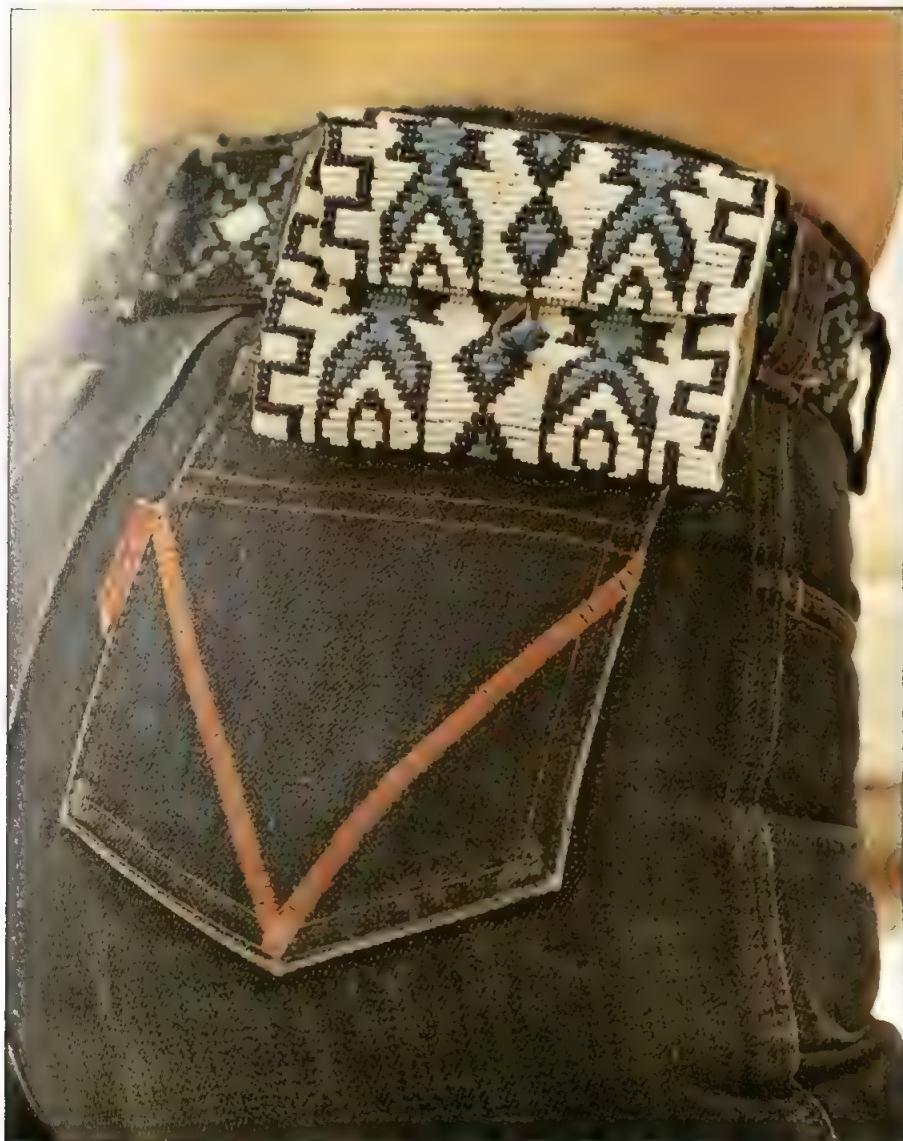
An alternative and quicker method is to fasten off the weaving thread and then stick pieces of transparent adhesive tape to the top and underside of the warp threads. The warp threads can then be cut short without danger of the work coming undone and the ends turned in. This should not be done on garments that are to be washed.

Weave the other neck trim in the same way.

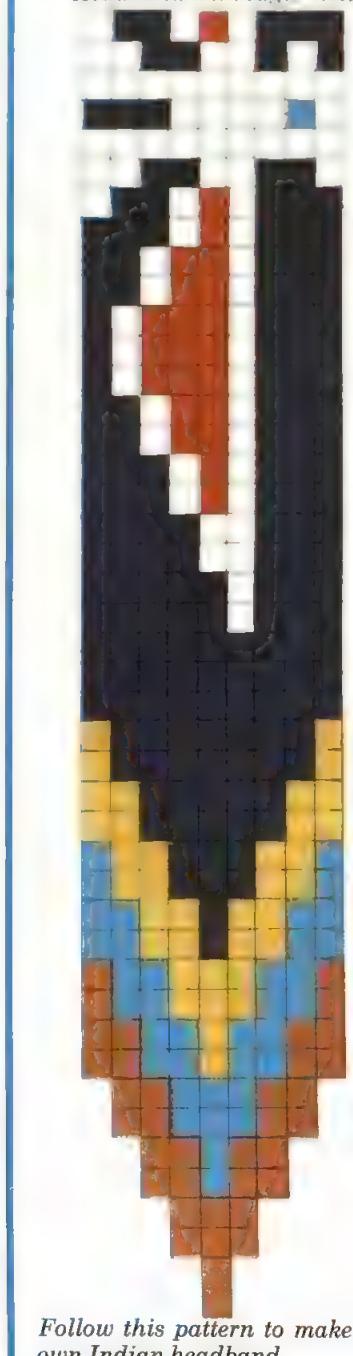
The neck trim in the photograph has been attached either side of an open neck on a denim top. A fairly sturdy material was chosen as the weight of the beads would pull a light-weight fabric out of shape.

Decorations for cuffs, pockets and collars can also be made in this way.

A modern example of bead weaving using designs and colours based on those used by the American Indians.



Headband with eagle motif.



Follow this pattern to make your own Indian headband.

centre of headband

Coral Mula

Colourful hedgerow work

Basketry 25

Hedgerow basketry is a way of making colourful baskets using natural materials—no dyes are used. The materials are quite free, costing nothing other than the time spent collecting them. Most young twigs from trees and shrubs can be used as well as creepers. Guidelines are given

for selecting suitable materials and a short list is given of the more common shrubs and trees which are suitable (see box overleaf).

Most basketmakers find the craft very rewarding; rambling in the countryside picking the material, and then turning it into colourful and original baskets.

If you are not collecting the material from your own garden, it is a good idea to ask permission from the owner of the property before starting.

Selecting woods

Basket woods must be cut when the sap content of the bark is at its lowest. This is after the leaves have fallen from the trees, during winter but before spring (by which time it is too late).

Many soils have different effects on the woods, and a certain wood in one area may not have the same working qualities when picked elsewhere. The weather also affects the woods and a warm, very wet summer can make some woods too fleshy. So, there are no hard and fast rules as to what to pick but some woods are more suitable than



others and, if you observe the following guidelines, you can't really go wrong. The twigs must be first-year growth. This means that a twig has grown sufficiently long for use since the last winter. The length depends on the thickness of the twig—for instance one that is the size of 8mm (1") handle cane at the thick end would need to be about 91cm (36") long to be usable, but a rod that is the size of No.6 (2.6mm) cane at the thick end need only be 30cm (12") long.

The rods must be very pliable see if you can wind each one round your hand without it snapping or kinking. The twig must have no, or very few, side shoots.

The twigs must be reasonably straight. Avoid any woods that are knobbly—there are so many lovely woods that it

is not worth worrying about unattractive ones.

Do not worry too much about the colour—even the dull brown twigs look attractive against the brightly coloured ones.

Storage

After the twigs are picked they must be left to shrink so that as much sap as possible can be lost without the material getting too dry and brittle. The best way to do this is to sort out

The distinctive and colourful appearance of hedgerow weaves are a direct result of the variety of twigs used. The techniques are similar to those which can be used for willow work—the base for a round basket is made in exactly the same way as when working with willow.

the woods into bundles of size and varieties or colours and then leave them outside in the garden, either under a hedge or on the grass, for three to five weeks. The length of time depends on the wood. You can hasten this drying process a little by bringing the rods to be used into a garage (or any unheated room) three days before use.

If you do not leave the twigs to dry sufficiently, they will shrink after you have made the basket and the result will be a very loose and wobbly basket. If you leave the twigs in the garage too long the bark will flake off in places—but they can be kept in the garden right through the winter.

When the weather gets warmer the rods will dry out too much and become brittle. They can be soaked for use but this is not very satisfactory: they need a long soak and tend to lose their lovely colour. It is better to use the materials picked during the winter and make cane and willow baskets during the summer.

After the twigs are dried they must still have a good appearance. Discard any twigs that are unattractive—many fruit trees become very crinkled on the bark which eventually turns a dull colour.

The twigs must remain woody when finally dry—some shrubs become soft and plant-like or flake away which makes them unsuitable.

General hints

Always use the techniques and tools used for willow work (Basketry chapter 23, page 2572).

Avoid using twigs that are too thick. If cutting off the butt end does not leave sufficient length, try splitting a rod in two, lengthwise, for the side weaving.

Hedgerow woods are particularly suitable for flower arranging baskets. If the rods are a bit brittle and the bend at the upsett or border breaks, turn the rods up (or down) very slowly. If you run out of twigs, white or brown willow can be combined successfully with the twigs.

Pick enough for your needs—you can calculate the quantity required by cutting out (Basketry chapter 23, page 2573) after sorting and grading the twigs. Always collect a few extra twigs. Do not worry about certain woods for specific parts of the basket—most woods can be used anywhere if they are of suitable lengths and thicknesses.

It is possible, but laborious, to peel the woods. However, the creamy inside wood, which has a tinge of the bark colour, brightens a basket—especially if only one type of wood is being used. If you do peel the twigs they can be used soon after picking.





Dick Miller

Small round basket

The small basket opposite is 12cm (5") across the base and 10cm (4") high excluding the handle. Since twigs are never alike, and the ones you have selected will vary from those used here, the cutting out and instructions should be regarded as a guide so adapt the instructions to your materials.

You will need:

Handle liners and 9 small nails.

Cut out:

5 base sticks 12cm (5") long.

12 very fine weavers for the base.

19 side stakes.

13 waling rods.

19 side weavers for french randing or use 8-10 thick rods split in half for ordinary randing.

Stoutish sticks for the handle—two will do for a simple handle or you can use three as on the one illustrated.

2 or 3 fine split weavers for the handle wrapping.

Make a cross of three into two with the base sticks and pair until the base measures 10cm (4") across.

Slype and insert the 19 side stakes.

Prick-up and tie the stakes together at the top.

With the waling rods put on one round of 4-rod waling starting with the tips. Join butts to butts and wale until the tips are reached.

French rand (or ordinary rand) for 5cm (2").

Insert the handle liners.

Starting with tips, 3-rod wale joining in butts to butts and finishing with tips.

Rap the work down to level it.

Put down a 4-rod or 5-rod border.

Remove handle liners and insert the handle bows. Nail them together across the top.

Wrap the nailed section with split weavers.

A child's willow rattle and a hedgerow basket. Designer Barbara Maynard.

Hammer a small nail into the ends of the handle bows to secure them. Do this from the inside of the basket at a point where the nail can pass through a thick weaving twig into the handle bow. Make sure the nail end does not protrude to the outside of the basket.

Oval apple basket

The base of the basket measures 31cm x 22cm (12" x 8 1/2") and height excluding the handle is 14cm (5 1/2").

You will need:

Handle liners.

Small nails.

Cut out:

3 base sticks 33cm (13") long and 7 base sticks 23cm (9") long.

About 40 fine base weavers—depending on their length.

29 stout side stakes.

26 weavers for the waling.

29 side weavers for french randing.

1 thick handle bow (or two finer ones) 81cm (32") long.

12 handle weavers—for a rope handle.

Insert the long base sticks into the short base sticks and arrange them in the usual way for oval work.

Put on equal amounts of pairing and reverse pairing until the work measures 29cm x 19cm (11 1/2" x 7 1/2").

Slype and insert the side stakes—two for each of the long sticks and the other short sticks and one for the remaining short sticks (the missing one creates an odd number).

Prick up and upset with one round of 4-rod waling (remember to start in two places on opposite sides of the base). Put on 4cm (1 1/2") of 3-rod waling.

French rand for about 7cm (2 3/4").

Insert handle liners.

Put on 2.5cm (1") of 3-rod waling.

Put down a 5-rod or 6-rod border.

Remove handle liners. Slype and insert handle bows. Secure handle with small nails as described for the small basket.

Rope the handle (Basketry chapter 5, page 727).

Hedgerow woods

Blackthorn. A very strong wood, grey in colour and good for stakes.

Clematis. The bark is knobbed and rather messy but it is easily peeled leaving a creamy wood.

Cornus (dogwood). Beautiful, pliable, deep crimson twigs which are sometimes green on one side. It eventually turns a dark, almost black, colour.

Elm. A lovely wood that does not need much shrinking time. Grows very fine if cut annually as in a hedge.

Hazel. Also very pliable, rather dark brown in colour; larger twigs can be used for handle bows.

Honeysuckle. It can be brittle but it comes in long lengths. It is a light brown colour and should be picked at the beginning of winter.

Ivy. Most types of ivy can be used. The long length, variety of colour and availability makes it a popular choice. Avoid using the tendrils with aerial roots.

Lime. A very pliable wood which needs plenty of shrinking time. It is easy to pick as it sends up so many suckers. Colours tend to be orange and green.

Maple. Very pliable with a glossy bark of deep green.

Poplar. A sweet-smelling wood—the scent lasts for months. Pale green in colour.

Privet. This is one of the few suitable evergreens. The leaves are easily stripped off. Needs little shrinking time and is greyish green.

Willow. Do not confuse this with commercial willow—this is the greatest wood of them all and comes in greens, reds and oranges. Do not worry too much about the variety, as long as the wood conforms to the guidelines given it will be suitable. Weeping willow, a beautiful light green, needs plenty of time to shrink. It can be used only for weaving whereas other willow can be used almost anywhere on a basket. Scarlet willow is magnificent and the long slender rods are easy to use.

The handle on the round basket consists of three bows nailed together at the top. It is wrapped and the bow ends are secured in the sides with small nails. The oval basket has a 'rope' handle. Designed by Barbara Maynard.



Renovating a chaise longue



The chaise longue, meaning (in French) long chair, was a popular piece of furniture in the 19th and early 20th centuries. Although there are many variations in design, its components are essentially the same: an elongated seat on which women could lie full length, a heavily padded head rest at one end and a shaped back which usually has inset padding with show-wood.

On all designs the construction of the upholstery is the same and is also similar to that described in earlier traditional upholstery chapters. The major differences are described in this chapter, together with the different ways of attaching the cover (see box overleaf).

A slightly different way of deep buttoning is also introduced. Although

quicker to do than the method described in Upholstery chapter 12, page 1894, the success of this method of deep buttoning depends on absolute accuracy in the marking of the buttoning pattern on the cover with the necessary allowances for pleating.

Order of work

Start by removing the old coverings and checking the original upholstery, following the method described for an easy chair (Upholstery chapter 15, page 2614). When applying the new upholstery, work on the head rest first, then the back (which is usually removable for the upholstery) and finally the seat.

Victorian chaise longue, with deep-buttoned head rest and back. The cover of the head rest and seat are finished with borders.





1. The bridle ties, which hold the stuffing, are worked in horizontal rows.

The head rest

If you had to strip this down to the frame, apply new webbing following the pattern of the original. Cover this with hessian in the usual way.

Bridle ties. These are worked with a curved needle and twine across the hessian in horizontal rows about 15cm (6") apart. Attach the twine to the edge of the hessian and make a back stitch in the centre of the head rest, leaving a loop loose enough to insert two fingers.

Tie off on the opposite edge leaving a loop of the same size (fig.1).

First stuffing. Insert the stuffing in the bridle ties, making it about 10cm (4") deep uncompressed. Allow the stuffing to overhang the front edge only.

□ Cover the stuffing with scrim and work panel stitching through to the hessian in four horizontal rows as for the bridle ties.

□ Tack down the scrim, making a firm roll along the front edge which over-

hangs the frame by about 2cm (4"). When turning under corners at the top, keep a slight diagonal pull on the scrim to help shape it round the scroll (fig.2).

□ Work a row of blind stitch along the front, back and the top edges, keeping it just above the tack line. Top stitch the front edge only, making the roll about 4cm (1 1/2") high.

Second stuffing. Work bridle ties into the scrim in the same pattern as before and apply the stuffing. Build it up to produce a crowned shape of about 6cm (2 1/2") uncompressed in the centre and feathering out to the edges.

Calico cover. Cover the stuffing with calico, temporary-tacking it to the underside of the top rail first. Smooth it down to the bottom, take it round the tack rail and temporary-tack in position. Cut the calico to fit round the uprights and temporary-tack.

□ Strain the calico over the top corners with a diagonal pull and temporary-tack. Then temporary-tack the front and back from bottom to top. Tighten the bottom and top edges if necessary, drive in all the tacks and trim off the excess calico.

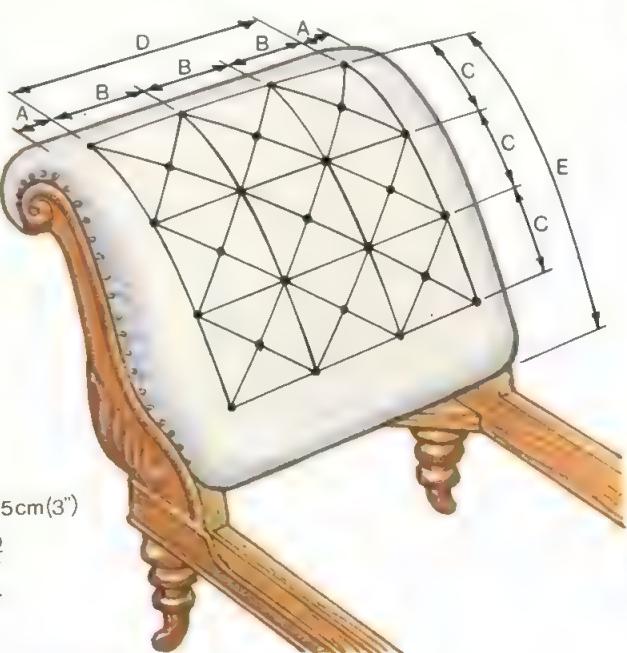
Top cover. If the top cover is to be plain or shallow buttoned without a border, apply the cover fabric as for the calico cover. If you are including a border, read the section on this (overleaf) before cutting out.

If you are deep buttoning the cover, proceed as follows.

Deep buttoning. Following the pattern on the original cover, mark out the positions for the buttons on the calico. If you prefer small diamonds the pattern could be marked as shown in fig.3.



2. Pulling the scrim diagonally round the scroll.



3. One method of marking the button pattern.

Using large scissors, cut a 2.5cm (1") diameter hole for each button through both layers of stuffing down to the hessian.

Make a button marker through each hole (Upholstery chapter 12). Place a layer of hinters felt over the calico, make a small hole at each button position and pull the markers through.

Mark the buttoning pattern on the wrong side of the top cover (fig.4) and place it over the hinters felt.

Starting with the bottom row, pull the button markers through the fabric at the corresponding button positions. Thread a button on each marker and tie with a slip knot. Tighten the knot to pull down the button until the fullness of fabric has been taken up.

Repeat this process for the next rows of buttons and neaten the fullness between the buttons into diagonal pleats as described in Upholstery chapter 12.

Neaten the fullness along the edges into pleats which lie at right angles to the edge of the frame, and tack or sew down.

The border. If you are applying a border as a means of saving fabric in the main panel, take the measurements for the main panel after the second stuffing and calico have been attached. Measure from 2.5cm (1") beyond the tack line of the back edge to just below the roll edge at the front.

After working any deep buttoning, attach the back edge of the cover with tacks in the usual way, smooth the fabric to the front and pin it to the stuffing just below the roll. Blanket stitch in position with a curved needle and twine.

Cut out the border to the appropriate size plus 2.5cm (1") all round for fitting. Pin it in position along the roll edge where it joins the main panel of fabric and mark the fitting line on the border with chalk. Unpin and stitch piping along the fitting line. Fold under the turning along the fitting line.

Repin the border in position and slip stitch (fig.5). Tack the remaining edges.

The back

This is built up and covered in the same way as the head rest. When applying the first filling, keep any edges which will be hidden flat so that the back will fit tightly against the head rest and seat. Work blind and top stitch along the top edge only.

The seat

The seat is worked in the same way as a dining chair (Upholstery chapter 3, page 468). Make the first stuffing about 12cm (5") deep uncompressed and allow it to overhang the front edge. Work the blind and top stitch along the front and foot only.

Border. If the cover fabric is applied with a border, stitch the main panel fabric just under the roll with a curved needle and twine.

□ Cut the border and apply it in the same way as for the arm rest.

Finishing off

Cut a piece of fabric to cover the outside section of the head rest and apply it as for the outside back panel of an easy chair. On some styles the back edge of this panel may be pulled round to the back and tacked there,

where it will eventually be covered by the back section.

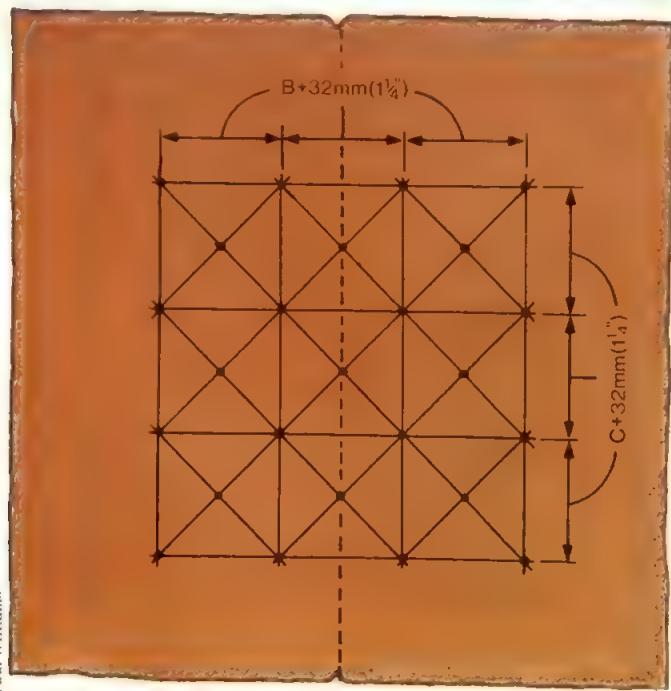
Cover any raw edges with gimp or braid. Re-fit the back section to the chaise. Cover the 'works' on the under side of the seat with black hessian which is tacked in place.

Styles of finishing

There are three major styles of applying the cover fabric to the head rest of a chaise longue. It may be plain and smooth; shallow buttoned (this technique is described in Upholstery chapter 6, page 81) or it may be deep buttoned.

The back section may be lightly padded as for some dining chairs or it may be more deeply padded with a stitched roll edge and finished in one of the ways used for the head rest. The seat is usually plain.

Borders. The seat and all styles of head rest may be finished with a border, which is a separate piece of fabric on the front, applied after the main panel has been attached. The use of a border saves having to pleat the main fabric to reduce fullness round the scroll on the head rest, and often makes a neater finish. Your choice of cover will largely depend on three factors—the existing finish (it is often easiest to follow the original design), the type of fabric being used (some patterns and stripes are not suitable for deep buttoning), and the width of the fabric being used (you can often save fabric by cutting separate borders).



4. Marking the fabric with allowances for pleating.



5. Using a curved needle to slip stitch the border.

Creative ideas 95

Renewed deck-chairs

Give shabby deck-chairs a new lease of life by recovering them with upholstery fabric, as an alternative to canvas. A 100% or part cotton cover will stretch the least with use. Lining the cover is another consideration, especially for the printed version.

To safeguard against wear and tear the velour/velvet cover (45% cotton, 55% synthetic) continues around the frame and as it is not tacked down it can be rotated from time to time.

You will need:

Ripping chisel or blunt wood chisel, mallet, hammer.

Woodworking adhesive.

Household bleach, medium grade glasspaper.

Polyurethane varnish or undercoat and gloss paint.

Paintbrushes, tape-measure.

Upholstery fabric and lining (optional).

Needle, thread, scissors.

14-16 tacks 1.5cm (½") long.

First remove old tacks from deck-chair by placing chisel under head of tack. Working with grain of wood, tap the chisel handle with the mallet and, when loosened, lift out tack with claw section of hammer. Repeat with remaining tacks. Stick any splintered wood in place with adhesive.

Bleach, strip and either stain or paint wood.

To calculate amount of fabric required, lay closed



Steve Bicknell

deck-chair flat and, keeping tape-measure taut, measure width inside frame. 90cm (36") fabric folded in half lengthways should be wide enough. Now measure length from outside edge of rungs where previous canvas was attached. Allow an extra 20cm (8") for printed cover and lining, if desired. For velvet cover allow double initial length and 15cm (6").

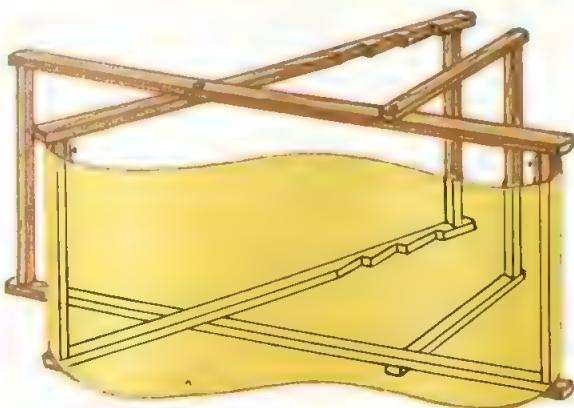
To make the cotton cover (fig.1) fold fabric and optional lining in half lengthways. With right sides together sew seams,

leaving one end open. Turn right side out. Turn under and hand stitch final end. Lay the deck-chair on one side. Using 7-8 tacks placed at 7.5cm (3") intervals, attach one end of doubled fabric to inside face of rung on notched frame length see fig.1. (Avoid previous tacking positions.) Bring fabric around rung, down to other end of un-notched frame length, around rung and tack to inside as before (fig.1).

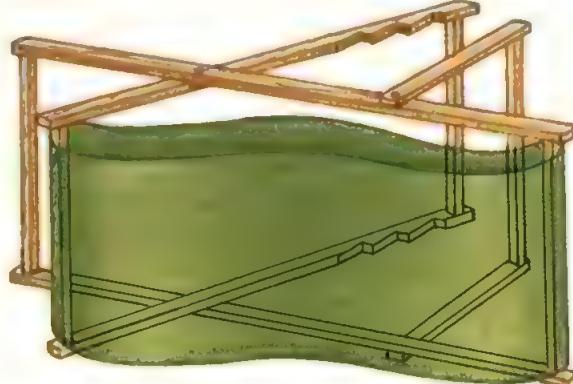
To make the velvet cover (fig.2) fold and stitch fabric—joining two lengths

Sit in style and for extra comfort make a matching cushion. Deck-chairs designed by Lorraine Johnson.

if necessary to go right round chair. To fit fabric on to deck-chair take fabric around bottom rung and with someone to hold weight of chair to one side, slip open end of fabric under sewing machine. Stitch open edges together from wrong side of fabric. These manipulations are necessary for a well fitting cover and will leave you with a few inches to finish by hand.



1. Folded double a single length is tacked to the rungs.



2. Here doubled fabric continues around the frame.

Paul Williams

Decorative plaster work

Clay 56



Decorative plaster work, sometimes called pargeting, is the technique of applying patterns to wet plaster. Possible patterns range from the simple, but effective, stippling with an ordinary scrubbing brush to quite complex relief work.

You can make a plain garden wall or screen wall far more interesting by this means. On the other hand, if you are feeling really ambitious, you can cover the entire outside of a house.

Other, related, forms of exterior decoration include the application of materials to wet plaster. For example, pebble-dashing involves throwing small pebbles at wet plaster so that they stick in place.

Applying plaster

You should mix the plaster for exterior plaster work as described in Clay chapter 54, page 2522. Work on a flat surface in a yard or garage. Use three

parts of cement to one part of fine sand and, with a spade, mix the dry materials with water until the plaster is of a soft, mud pie consistency.

You will need:

Plaster mix.

Plasterer's trowel and mortar board

Gauging trowel.

The first thing to master is actually putting the plaster on the wall. Watch an experienced plasterer at work and this will look easy. Try it yourself and you will find there is more to it than you thought. Practice will help. It is also important to apply the plaster at the correct angle.

Scoop some plaster mix on to the mortar board.

Use the plasterer's trowel to scoop some plaster up from the mortar board and slap it down again. Do this several times.

Decorative plaster emphasizes the rustic character of these cottages.





Courtesy of Architectural Antiques

This will smooth out any lumps. It will also give you a feeling of power over the plaster which will add to your confidence.

Begin at the top of the wall and work downwards.

Press the full trowel against the wall and sweep it upwards and to the right, spreading the plaster as you go (fig.1). Note that when applying plaster you are working from the heel to the tip of the trowel.

Smooth over the lines you have made, this time putting pressure on the trowel from tip to heel (fig.2).

A wide variety of patterns can be combined to decorate a wall. Note how the different patterns are worked in sections to avoid a haphazard effect.

Try to keep the trowel flat to the wall, otherwise it tends to 'chatter' up the wall and to make more marks than it removes.

- Allow the plaster to dry out for about half an hour.
- Apply a second coat of plaster in the same way.

When the wall is plastered, and the plaster still damp, it is quite easy to

apply various forms of simple decoration. If you make a mess, smooth over the plaster with the trowel and begin again.

Old English pattern

You will need:

Freshly plastered wall.

Old distemper brush.

- Simply push the brush into the damp plaster at regular intervals, working across the wall from left to right (fig.3). When the plaster is dry, the wall can be whitewashed for a more dramatic effect or left in its natural colour.



1. Spreading plaster with a trowel.



2. Smoothing the plaster.



3. Applying pattern with old brush.



4. Creating a pattern with trowel edge.

Squares

You will need:

Freshly plastered wall.

Plasterer's trowel.

Use the edge of the plasterer's trowel for this design (fig.4), in which the squares are made up of alternate horizontal and vertical lines. The length of each line is dictated by the length of the trowel.

Space the lines as evenly as you can, but don't worry if the squares are not totally symmetrical.



5. Stippling with a scrubbing brush.

Stippling

You will need:

Freshly plastered wall.

Scrubbing brush.

Bang the scrubbing brush rhythmically against the damp plaster (fig.5).

Rinse the brush in water from time to time or it will become clogged with plaster and will not make an effective mark.

If you give the brush a slight twist as you lift it from the wall you can create an interesting cat's paw effect.



This house in Clare, Suffolk has plaster decoration boldly executed in relief.

Tyrolean effect

This is created by means of a Tyrolean machine which is designed to splatter a wet plaster mix on to a wall. These machines can be hired.

You will need:

Tyrolean machine.

Plaster mix made up of six parts of sand, one part of cement and one part of lime.

Plasterer's mortar board and trowel.

Sponge.

Tyrolean mix from a builder's supplier, made up to the manufacturer's instructions.

Strip of stiff card (optional)

Plaster the wall in the usual way.

When the plaster is almost dry, smooth over it, quite quickly and lightly, with the sponge. This will give 'keys' for the Tyrolean mix to cling to.

Cut a strip of stiff card, slightly longer than the opening of the machine.

Cut a slot at each end of this card and wedge it on to the front of the machine to stop the mix from spilling out at the front.

Use a small tin to fill the Tyrolean machine (fig.6).



6. Filling the Tyrolean machine.

Hold the machine square to the wall and wind the handle. Tiny droplets of the mix will splatter out all over the surface (fig.7).



7. Using the Tyrolean machine.

Keep the machine moving in all directions—up and down, left and right—because the aim is to build up layer upon layer of splatter.

Refill the machine as required.



8. Applying a second coat.

This machine sprays out quite liberally, so never work in a high wind and be careful not to spray your neighbour over the top of the wall.

- When you have covered the wall, allow it to dry out for about an hour.
- Apply another layer in the same way as the first (fig.8).

Two layers may well be sufficient to give you the surface you want. However, if you wish, you can allow the second layer to dry out and apply a third.

Pebble dash

This is another finish that can be applied to wet plaster.

You will need:

Freshly plastered wall.

Small pebbles from a builder's merchant.

Gauging trowel.

Plastic bowl or bucket.

Plaster the wall in the usual way, and make sure that the container of pebbles is near at hand because you must work quite fast.

Put as many pebbles as you can comfortably hold into the bowl or bucket and hold it on one hip.

Scoop up pebbles on the trowel and flick them hard at the wet plaster (fig.9).

If you have to stop for a while, either



9. Pebbles flicked at plaster.

to move the ladder or from sheer exhaustion, you must avoid forming a hard line.

- Use the edge of the trowel to cut the bottom edge of the pebble dashed area into V-shaped points, roughly the size of the point of the trowel.

Splash water on to the area about 5cm (2") above the points.

While you are moving the ladder or mopping your brow the water will seep down the V-cuts to the plaster below. Continue to pebble dash as soon as you can.

Georgian fluting

Georgian fluting is created by nailing horizontal battens on to the wall and filling the area between them with plaster. When the plaster has dried, and the battens have been removed, the typical, symmetrical, horizontal grooves are revealed.

You will need:

Plaster mix.

Battens, about 5cm (2") deep.

Hammer and nails.

Moulding oil, (Clay chapter 54, page 2524).

T-square.

Plasterer's trowel and mortar board.

- Decide how far apart you would like the fluting to be.

Use the T-square to work out exactly where the battens are to go and to ensure that they are straight.

Grease each batten with moulding oil.

Nail each batten firmly to the wall.

Plaster the area between the battens in the usual way.

Draw the side of a straight edge across the plastered area to ensure that the plaster is flush with the battens and to scrape off any surplus (fig.10).

Smooth away any rough marks with



10. Removing surplus plaster.



11. Battens being removed.

the gauging trowel.

Allow the plaster to dry out completely. This can take several hours, depending on humidity.

Remove the battens from the wall (fig.11).

The raw wall will now be visible at the back of each groove and must be covered with a thin layer of plaster to finish the groove.

Take a small piece of wood the width of the groove and hammer two nails into it so that you can hold it easily.

Use the piece of wood to smear plaster in the back of each groove (fig.12).

These are some of the best known and most effective forms of decorative plaster work. Once you are used to working with plaster, and understand what it will do, you can begin to think of creating your own designs.



12. Plastering the grooves.

Spider and Fan; Little Fir Tree lace patterns

Yarn — bobbin lace 4



1 and 2, pages 2506 and 2526 respectively). For detailed instructions on all the stitches used, see Bobbin lace chapter 2, page 2526.

Spider and Fan

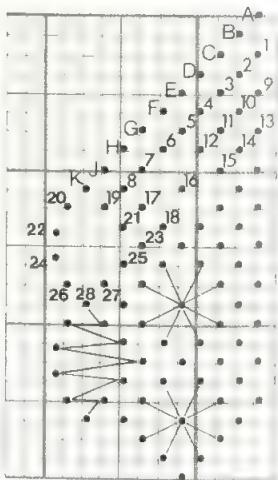
This pattern is wider than any learned previously—26 bobbins are required.

Wind 13 pairs of bobbins, using a fairly thick thread, such as DMC coton perlé or Anchor pearl cotton No.8.

Prepare the pricking card as for the basic stitches (see Bobbin lace chapter 2) using graph paper with 8 squares per 2.5cm (1") and the pattern given in fig.1. Mark the pin-hole numbers with ink or a fine felt-tipped pen on the pricking card for easy reference.

Note: if you wish to make a finer lace, use a finer thread such as Bocken's No.50 and graph paper with 10 squares per 2.5cm (1").

If you prefer to make lace that can be easily machine washed—for a pillow-case border or tray cloth edging for example—use No.20 crochet cotton. This thread has a much higher twist than is normally used for lace making and is not usually considered to be very suitable since it produces a rather hard, stiff lace. It will, however, stand machine washing.



1. Graph pattern for Spider and Fan.

Following fig.1, put a pin in each of the holes A, B, C, D, E, F, G, H, J and K.

Hang three pairs of bobbins from pin A, one pair of bobbins from each of the pins B, C, D, E, F, G, H, two pairs from pin J and one pair from pin K.

Work pin-holes 1, 2 and 3 in exactly the same way as pin-holes 1, 2 and 3 in the Little Torchon Fan (see Bobbin lace chapter 3, page 2610).

Work pin-holes 4, 5, 6, 7 and 8 in the same way as pin-holes 2 and 3, each time taking the left-hand pair of the two pairs used for the previous pin-hole, and one new pair. For

This chapter introduces you to two more patterns for Torchon lace. The first is the Spider and Fan pattern which provides a suitable sequel to the Little Torchon Fan described in the previous chapter (see Bobbin lace chapter 3, page 2610) as parts of the pattern are similar.

The second pattern given in this chapter is Little Fir Tree and is completely different from any of the patterns covered so far. Instructions are given for making a round mat.

The basic requirements for these two designs are the same as those for the basic stitches (see Bobbin lace chapters



example, pin-hole 4 uses the left-hand pair from pin 3 and the pair from pin D, and so on.

□ When all eight pin-holes have been worked, take out pins A, B, C, D, E, F, G and H and carefully pull down the loops of thread.

Pin-hole 9

□ Work as pin-hole 1.

Pin-holes 10, 11 and 12

□ Work as pin-holes 2, 3 and 4.

Pin-hole 13

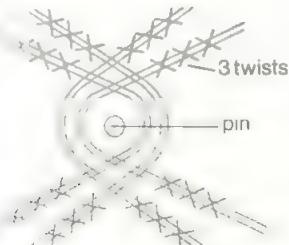
□ Work as pin-hole 1.

Pin-holes 14 and 15

□ Work as pin-holes 2 and 3.

Pin-hole 16

You are now ready to work the spider, the basic construction of which is shown in fig.2. This will be worked



2. Basic construction of the spider.

with the pairs hanging from pins 6, 7, 12 and 15.

□ Put two more twists, right over left, (making three in total) on each of the pairs hanging from pins 6, 7, 12 and 15. The spider's body is worked entirely in cloth stitch (hereinafter cs).

□ Work the pair directly to the left of centre (from pin 6) in cs through the two pairs to the right of centre (from pins 12 and 15).

□ Work the other pair to the left of centre (from pin 7) in cs through the same two pairs.

□ Put a pin in pin-hole 16 so that two of the four pairs hang on either side of it.

□ Make sure that the threads are taut. □ Work the pair directly to the left of centre in cs through the two pairs to the right of centre.

□ Work the other pair to the left of centre in cs through the same two pairs.

□ Put three twists on each of the four pairs.

This completes the spider.

Spiders occur frequently in Torchon lace and may have any number of legs. The method of working is, however, always the same.

Pin-hole 17

□ Work as pin-hole 2, using the right-hand pair from pin 8 and the first of the spider's legs.

Pin-hole 18

□ Work as pin-hole 2, using the right-hand pair from pin 17 and the second of the spider's legs.

□ Pin-holes 19, 20, 21, 22, 23, 24, 25,

26, 27 and 28 constitute the fan. This is worked in exactly the same way as the fan in the Little Torchon Fan (see Bobbin lace chapter 3).

□ Take out pin J and carefully pull down the loops.

□ Put one twist on each of the pairs hanging from pins 23, 25 and 27.

This completes a pattern repeat.

It can be seen that this pattern falls naturally into three sections—the Torchon net, the spider and the fan.

Corner

If you wish to make a lace edging for a handkerchief or mat, it is advisable to work a proper corner as for the Little Torchon Fan (see Bobbin lace chapter 3).

Follow the general instructions for working a corner given for the Little Torchon Fan, using the corner pattern given here (fig.3). Note that the fans immediately before and after the corner are larger than those in the rest of the pattern so as to accommodate the spiders.

If pin-holes a to o (see fig.3) are worked in order, it will be seen that an extra pair of bobbins must be brought into the pattern from the right at pin h to keep the threads running correctly.

Also, note that you must work four extra rows of the fan pattern to complete the fan.

Little Fir Tree

The fan in this pattern is highly typical of Torchon lace, although quite unlike that used in the previous pattern. A narrow edging with this type of fan is thought to have trimmed Oliver Cromwell's baby clothes.

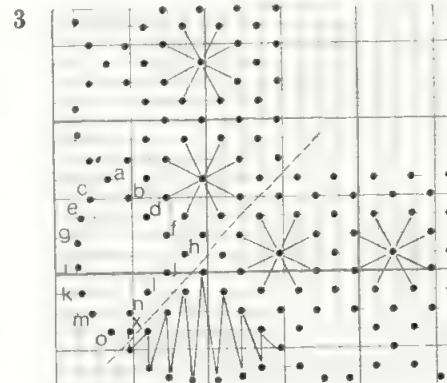
A pattern and instructions are given for making an edging for a round mat (fig.4). There is no reason, however, why this pattern cannot equally well be worked for a straight edging—a pattern is also given for this (fig.5).

□ To make the round mat edging, trace the pattern (see fig.4) very carefully and make an accurate pricking from the tracing. It is easier to prepare the pricking in this way because it is round and does not lend itself well to graph paper.

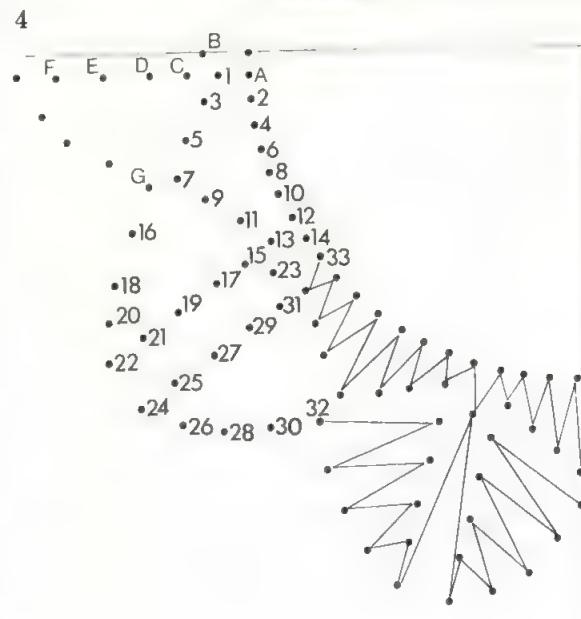
□ Mark the pin-hole numbers for at least one pattern repeat for easy reference.

□ Wind nine pairs of bobbins with pearl cotton No.8 (or crochet cotton No.20 if the finished article is to be frequently machine washed).

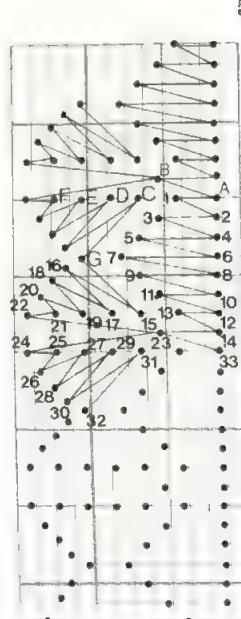
3. Spider and Fan corner pattern.



4. Quarter-circle Little Fir Tree trace pattern.



5. For a square handkerchief border, work the Little Fir Tree pattern using this pricking for a straight border.





Sample of Spider and Fan pattern.

Following fig.4, put a pin in each of the holes A, B, C, D, E, F and G.
 Hang one pair of bobbins from pin A, two pairs from pin B, one pair from each of the pins C, D, E, F, and two pairs from pin G.

Pin-hole 1

Work the pair from A (weavers) to the left in cs through three pairs.
 Twist the weavers twice, right over left, and insert a pin in pin-hole 1 between the weavers and the last pair passed through.

Pin-hole 2

Work back through the same three pairs in cs.
 Twist the weavers twice and insert a pin between the weavers and the last pair passed through.

Pin-hole 3

Work as pin-hole 1, but work through four pairs.

Pin-hole 4

Work as pin-hole 2, but work through four pairs.

Pin-hole 5

Work as pin-hole 1, but work through five pairs.

Pin-hole 6

Work as pin-hole 2, but work through five pairs.

Pin-hole 7

Work as pin-hole 1, but work through six pairs.

Pin-hole 8

Work as pin-hole 2, but work through six pairs.

Pin-hole 9

Work as pin-hole 1, but work through five pairs.

Pin-hole 10

Work as pin-hole 2, but work through five pairs.

Pin-hole 11

Work as pin-hole 1, but work through four pairs.

Pin-hole 12

Work as pin-hole 2, but work through four pairs.

Pin-hole 13

Work as pin-hole 1, through three pairs.

Pin-hole 14

Work as pin-hole 2, through three pairs.

Then work the weavers to the left in cs through two pairs.

Twist the weavers once and leave.

Put one twist on each of the pairs hanging from pins 7, 9, 11 and 13.

Take out the pins B, C, D, E and F and carefully pull down the loops of thread.

Note: it will be seen that there is no foot edge on this pattern. If one is preferred, work as follows:

For the last stitch before all the pin-holes on the right-hand edge, ie pin-holes 2, 4, 6, 8, 10, 12, 14 and 33, twist the weavers once and work cloth stitch and twist (hereinafter cst). Then put a pin between the second and third pairs from the right. Leave the extreme right-hand pair aside on the right.

Pin-holes 3, 5, 7, 9, 11 and 13 are then worked in the same way as described previously, but through one pair less each time.

For example, pin-hole 2 would read as follows: work back through the first two pairs in cs. Twist the weavers once and work cst with the next pair on the right (ie the last of the three). Put a pin between the second and third pairs from the right and leave the right-hand pair aside on the right.

Pin-hole 3 would now read: work back across the row to the left in cs with the second pair from the right, working through three pairs only. This will produce the same pattern as above but with a foot edge.

Pin-hole 15

You are now ready to work the fan.

Work the left-hand pair from pin G (weavers) to the right in cst through five pairs.

Twist the weavers once more and insert a pin between the weavers and the last pair passed through.

Pin-hole 16

Work back through the same five pairs in cst.

Twist the weavers once more and insert a pin between the weavers and the last pair passed through.

Pin-hole 17

Work as pin-hole 15, but work through four pairs.

Pin-hole 18

Work as pin-hole 16, but work through four pairs.

Pin-hole 19

Work as pin-hole 15, but work through three pairs.

Pin-hole 20

Work as pin-hole 16, but work through three pairs.

Pin-hole 21

Work as pin-hole 15, but work through two pairs.

Pin-hole 22

Work as pin-hole 16, but work through two pairs.

Pin-hole 23

Work as pin-hole 15, but work through six pairs.

Pin-hole 24

Work as pin-hole 16, but work through six pairs.

Pin-hole 25

Work as pin-hole 15, but work through two pairs.

Pin-hole 26

Work as pin-hole 16, but work through two pairs.

Pin-hole 27

Work as pin-hole 15, but work through three pairs.

Pin-hole 28

Work as pin-hole 16, but work through three pairs.

Pin-hole 29

Work as pin-hole 15, but work through four pairs.

Pin-hole 30

Work as pin-hole 16, but work through four pairs.

Pin-hole 31

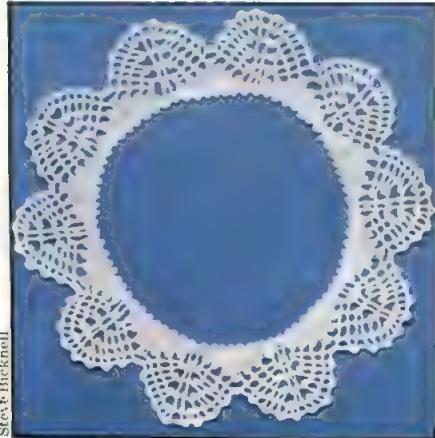
Work as pin-hole 15, through five pairs.

Pin-hole 32

Work as pin-hole 16, through five pairs.

Pin-hole 33

Work the pair hanging from pin 23 to the right in cs through two pairs.



Steve Bicknell

Circular Little Fir Tree border for a round mat.



Above: note the highly effective use of a double border in this early 20th century Belgian Torchon lace handkerchief.

Right: this unusual example of coloured Torchon lace was made in Russia.

Twist the weavers twice and insert a pin between the weavers and the last pair passed through.

This completes a pattern repeat.

Work right round the mat in this way, moving the cover cloth when necessary. When you get about half-way round, you will find that the first pins get in the way. Push down flat all the pins on the right-hand edge and round the first triangle of cloth stitch. Then, in the remainder of the pattern, take out two pins in every three and push the third flat into the pillow as you continue round. In this way, the bobbins and threads will be able to lie over the completed work when you near the end. To finish off, cut a circular piece of linen slightly larger than the inside edge of the lace. Place the lace edging centrally on top of the circle of linen and sew with a buttonhole stitch. This is the easiest way of dealing with a circular edge.



Steve Brinkell

Pyrography and poker-work



Paul Kemp

Pyrography is a rather intimidating term applied to an ancient technique of decorating wood. Pyrography—literally 'fire-writing'—entails burning designs into wood with a heated metal implement. Poker-work is a similar technique but applies to lettering and crude decorations while pyrography is more pictorial and intricate.

The art of pyrography dates back centuries but seems to have originated as a folk art in Northern Europe. In the 19th century a number of interesting examples of pyrography were produced, some of which can be seen in the Pinto collection housed in the Birmingham Museum. These 19th century artists worked with a variety of fine steel rods which they heated over a charcoal fire. The method of burning was sometimes supplemented by the use of acids and

The pyrography machine consists of a 'pencil' and a control unit which regulates the heat.

hot sand. Similarly, traditional poker-work—as the name implies—made use of hot pokers or rods of iron to burn patterns into the surface of the timber. Today, pyrography makes use of a small electric machine with an attached 'pencil'. The pencil is heated via the machine and serves the same function as the fire-heated rod in traditional work.

The pyrography machine

The skill required to master the traditional techniques of poker-work put it out of reach of the amateur but simple patterns can be made with metal rods or wire heated over a gas ring or

with a blowtorch. Iron and steel are the best metals, though strong copper or brass can be used.

The pyrography machine now makes it possible for even an amateur to carry out the most intricate detail as well as simple designs such as repeat patterns. Two main parts make up the machine: the pencil and the control unit.

The pencil is handled in exactly the same way as an ordinary lead pencil. The tip of the pencil, which is actually used to burn the design, is referred to as the point. It is made from a length of alloy wire and can be easily bent with pliers to form any shape, making possible a great variety of styles.

Spare points are available and replacing them is a simple procedure. Extra wire is also obtainable which can be worked into virtually any shape—eg to provide a 'brand' for repeat patterns. The control unit is fitted with a dial marked from 1 to 7; this controls the heat of the pencil points.

Technique

With the aid of the pyrography machine delicate ornamentation and lettering can be burnt into such wooden objects as spice racks, house nameplates, clock faces and wooden jewelry. Wooden toys and bowls can also be decorated and detailed with the technique.

Almost any wood is suitable, depending on the desired effect. A light-coloured fine-grained timber is best to begin with if you are going to attempt delicate lines. Of the most readily available timber, birch, sycamore, holly and lime are recommended. Birch ply and various veneered boards can also be used. Leather is another suitable material for decoration.

When burning the design, different shades can be obtained by varying the pressure and speed of the pencil. In all cases try and keep a light, even pressure because if you hesitate during a stroke, the heat will cause an unsightly blob on the pattern. Too much pressure will bend the point. Begin and end each stroke with the heated point off the wood.

The more slowly you move the pencil, the deeper will be the burn and the darker the shade. Traditional poker-work relied on deep, dark burns for its effect; with the pyrography machine a greater variety of shading is more easily achieved.

For plain line work, the loop point is most suitable, but use a flat or spoon-shaped point for shading. Very fine lines are done with the edge of the spoon-shaped point. A contrasting effect of fine white lines on a scorched surface can be obtained by using a chisel with a small V-shaped blade—known as a carver's parting tool—to

carve through the blackened surface and expose the white wood beneath. Completed pieces should be sealed with a clear varnish. Coloured varnish can also be used to give a different effect.

Decorative pyrography

The salad bowls and kitchen utensils in the photograph illustrate some of the designs possible.

Designs can be taken from magazines or drawn freehand. Trace or draw the pattern on to the wood in pencil to provide a guide from which to work.

You will need:

A pyrography machine with some spare alloy wire and a few extra points.

Long-nosed pliers and small screwdriver. Asbestos mat.

Pencil, tracing paper, carbon paper and masking tape.

Clear or coloured polyurethane varnish.

Medium and fine grade glasspaper.

Small V-shaped chisel (optional).

A suitable piece of wood or wooden object to decorate.

Select a suitable piece of wood and smooth it down with medium then fine grade glasspaper.

Draw the design either straight on to the piece of wood or trace it on

lightly using carbon paper. The carbon paper and tracing paper should be held together in position with masking tape. It is not necessary to trace in every detail as this can be easily copied when you come to use the pyrography pencil.

Once you have transferred your design you can remove the carbon paper and begin burning in the design. Work carefully with the pencil set at a low heat, and burn in the outline. Use the plain loop nib for this.

The detail and shading is done with a flat or spoon-shaped nib, keeping the dial at the same temperature. Darker shadows are produced with a higher temperature. Use the edge of the flat nib for fine lines. When the piece is finished, seal with a clear or coloured polyurethane varnish.

Traditional poker-work

Many objects can be decorated with the traditional poker-work method. The pyrography machine may not be necessary for very simple work and you can use pieces of wire or metal shaped into various patterns. The wire can be heated over a gas plate or with a blowtorch. The piece of wire should be a dull red when removed from the flame. Wind a cloth around the top

part of the wire to prevent yourself from being burnt. You should also have an asbestos mat nearby to lay the hot pieces of iron on when you have finished using them. Alternatively drop them in a container of cold water.

For poker-work done in the traditional way you can make poker from old wire coat hangers. Cut them up with wire cutters and bend into suitable shapes. Thicker lines can be obtained by using steel rods. The thicker the metal you use, the harder it is to bend into intricate shapes. Circular patterns can be obtained by using the ends of steel pipes similar to those used by plumbers.

You will need a pair of heavy pliers or a strong vice in which to bend the metal. Make the poker fairly long so that you can hold it far from the heated end. Either wear asbestos gloves or wrap a damp rag around the handle end of the poker. However, unless you are working on a large scale, the pyrography machine is suitable for both poker-work and pyrography.

Very intricate and detailed patterns are possible with the use of the pyrography machine. Designs on the kitchen utensils are by Diana Smith.



A deep-buttoned chesterfield



On a large piece of deep-buttoned furniture which takes considerable time and skill to re-upholster by traditional methods, foam rubber can be substituted for the second layer of stuffing. This is particularly helpful on chesterfield settees, for example, where the heavy buttoning is much easier on foam than if the second layer were the traditional horsehair. Nevertheless, the re-upholstery of a chesterfield is a considerable undertaking and you should tackle it only if you have had experience in other forms of upholstery, including an easy chair and deep buttoning (Upholstery chapters 12 and 15, pages 1894 and 2614).

Order of work

Strip the old upholstery first so that you can see the extent of re-upholstery required and also how many materials will be required.

Re-upholster and cover the seat first, then tackle the inside back and arms. Finish off with the outside panels and facings.

Stripping the old upholstery

Follow the procedure described in Upholstery chapter 15 for stripping an easy chair. If you do have to remove the first stuffing from the inside back and arms in order to replace the springs or spring hessian, lift it off

carefully in one piece so that it can be re-used.

Use the pieces of the old cover as a guide to the amount of fabric required. You do not need a calico cover and wadding for the inside back and arms, although you should use them for the seat. The top stuffing from the back can be washed and re-used on the seat.

As well as any scrim required for the seat, you will also need pieces large enough to cover each inside arm and the inside back, plus 10cm (4") all round for turnings.

The seat

This is upholstered in a very similar way to an easy chair (Upholstery chapter 15). Most chesterfields have an independent sprung edge which is described in the same chapter.

The back and arms

Replace the webbing and relash the springs in the pattern of the original upholstery (figs. 1 and 2). Generally you can re-use most of the old springs and will need new ones only if the old ones are broken or very mis-shapen.

Cover the surfaces with hessian. Keep



1. The top springs are relashed along the outside back of the frame.



2. The top and back springs are relashed along the inside back of the frame.

the grain straight along the top of the scroll and stitch the fullness into darts at the corners (fig.3).

Remember to stitch the tops of the springs to the hessian (fig.4).

Lay the first stuffing from the original upholstery in position over the hessian. Cover with new scrim.

Tuck the raw edges of the scrim under the top and bottom edges of the back and arm sections of the stuffing as if you were starting from the beginning with new stuffing. Tack the front edges on the arms in the same way.

Where the back meets the arms, overlap one edge over the other and turn under the overlapping edge so that the fold lies along the junction of the back and arms. Stitch firmly with a curved needle and twine.

Work top stitching through the new scrim on the original roll edges (fig.5). There is no need to work blind stitching.

The foam. Use 7.5cm (3") thick foam and cut pieces from paper templates for the back and each arm.

For all the sections, measure the length required from the seat, straight up and over the scroll to the tack bar

on the outside. For the width of each arm section, measure at the top of the frame from the front edge to the junction with the back. This will leave a triangular section between the back and arms which should be cut separately and inserted late during the buttoning process.

For the width of the back, measure between the junction at the top.

The buttoning pattern. Mark your buttoning pattern on the scrim. The top row of buttons should lie along the centre of the scroll. Use the original buttoning pattern as a guide or mark off a grid of diamonds measuring 22.5cm (9") wide by 27.5cm (11") high. Mark the foam to correspond.

At this point you will be able to estimate how many buttons you will need and should order them now if you are having them made. Always order a few extra in case you lose any.

Planning the cover. The cover fabric should always be applied with the warp threads running vertically, and joins to make the required width are done by the vandyking process (see Upholstery chapter 11, page 1870).

Plan the joins so that they come at the

junction of the arms with the back; this is where you will have a lot of fullness near the seat and you can lose it with the vandyking. On many chesterfields you will also have to vandyke a join in the centre back.

Mark your buttoning pattern on the back of the cover sections, adding 4cm (1½") to the size of the basic diamonds to give the necessary fullness when the buttons are pulled down.

The buttoning. Lay the back foam in position and place the fabric on top of it. Start buttoning on the bottom row, working from the centre of each fabric panel to the edges. Button the rows above (fig.6) and vandyke the centre join if there is one.

On the arms start at the front edge on the bottom row and work towards the back. Button the rows above and then insert the extra foam. Notch the back edge to make it lie flat (fig.7). Vandyke the join with the back (fig.8).

Borders. When all the buttoning is done you can attach the front borders and outside panels. Finish off the chesterfield with a piece of black hessian tacked to the underside of the frame to cover all raw edges and tacks.



3. Hessian is darted and stitched to neaten fullness at the back corners.



5. Stuffing replaced with new scrim and top stitching along roll edges.



7. Inserting the triangle of foam. The back is notched to make it lie flat.



4. The new hessian in position with the springs stitched to it.



6. Buttoning in rows from bottom to top, working from the centre outwards.



8. Vandyking the fabric at the back corners for a neat, invisible join.



Introducing raffia coil work

Raffia comes from the leaf of a palm tree which grows in hot climates in Africa and Asia. Raffia is a versatile material—extremely tough and yet supple and easy to handle.

There are many ways of using raffia—it may be woven over a cardboard base by a child or stitched tightly into place to make beautiful bowls and urns. It may be used for embroidery on an existing basket or linen to make colourful beach bags and handbags. It can even be knitted or crocheted.

Although the basic techniques of raffia work are simple, they can be developed by the individual craftsman to produce articles of exceptional beauty. One has only to look at colourful North American Indian work or very fine African work to see this.

The type of raffia work described in this and the next chapter is called coiled work. It involves wrapping and stitching a material, such as cane, into a coil. Raffia is used for the stitching and there are various stitches that can be used. Once the coil is started, it is just continued round and round until it is large enough for your requirements.

This chapter describes the start of the coil, the various stitches and joining new lengths. The next chapter describes how to make bowls—that is, raising the sides of the work, and also how to design and fit patterns.

Buying raffia. Good quality raffia can be purchased by the hank from craft shops, either natural or in a variety of colours. If you cannot get the colour you want, however, raffia can be easily dyed (Basketry chapter 22, page 2359). Raffia of a poorer quality—though still quite usable—is available from gardening shops.

Synthetic raffia can be used with equally good results and has two distinct advantages over the natural raffia. Firstly, the colours are much brighter and more vibrant and, secondly, it comes in continuous lengths of even thickness and is therefore easier to use.

Tools and technique

There are two necessary components in coiled work—the core and the wrapping material. Any round pliable material

can be used for the core—cane, willow, straw, rushes or string. The choice of core will influence the firmness of the finished basket. The wrapping around the core is done with raffia.

The beginner will find that soft, pliable, thick string or fine rope (about 6mm (1/4") in diameter) for the core and raffia (natural or synthetic) for the wrapping are the best materials with which to begin.

You will also need a pair of scissors and a needle. The needle must have a large enough eye through which to thread the raffia and it must be blunt. Special raffia needles which are flat and pass through the work easily can be purchased. A No.14 tapestry needle or a fine rugging needle will do just as well to start with.

Coiled work

Do not be too ambitious at the beginning. Stick to a flat shape and avoid fancy patterns at first. Be content with single bands of colour if you want any decorations.

It does not matter which way you work, either clockwise or anti-clockwise, or whether you are left or right handed. All coiled baskets are started in the middle of the base.

To start the coil shave the end of the core, whether it is cane or willow, rope or rush, down to a point. If using cane or willow, the start will be easier if you soak the material first.

□ Place a piece of raffia along the end of the core so that the long end of the raffia sticks out beyond the pointed core end.

□ Wrap the core with the long end of raffia starting 12mm (1/2") from the point. Wrap about 25mm (1") of the core binding in the short end of the raffia at the same time (fig.1). (There is no need to

Paul Williams



1. Securing raffia end.

Ethnic baskets in traditional designs made by the Washoe Indians. Courtesy of Heard Museum, Phoenix, Arizona.

Jerry D. Jacka





wrap right to the point—it is difficult to make the raffia stay on the core at the tip and, in any case, the end will be caught into the wrapping on the first round of coiling.)

Twist the covered section of core into a tight circle—the smaller and closer the better although this is something that comes with practice.

Thread the needle to the end of the raffia so that you can pass it through the centre of the ring to wrap the point in securely (fig.2).

Now you can start with any stitch you

Do not leave too long an end at the point where it is joined in—the end will be held firmly after only a few stitches. Continue to work with the old end until there is 5cm (2") left, then pick up and use the new thread, binding the old end in as you go.

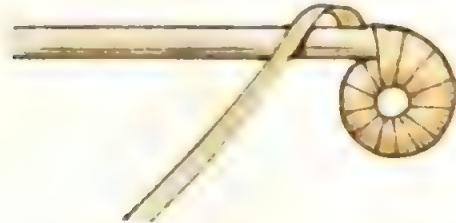
Joining the core. There are two methods of renewing the core.

The first method is to make a diagonal cut at the end of the old core and work until you have nearly reached the beginning of the cut. Cut the new end with a diagonal to match the one on the old end. When the two ends are placed together they should be the same thickness as the core. Holding them together stitch over both to secure the new end.

The second method is particularly suitable for cane but is no good for a rope core. Make a cut 7.5cm (3") long to halve the old and the new end. Cut across one half on each end to remove half the cane. Fit the two ends together as shown in fig.3.



3. Joining two cane ends.



2. Starting the coil.

like, passing round and between the new section of the core you are covering and the previous round. The new core should fit closely next to the previous round or the work will be open and sloppy.

Joining raffia. When the old end has about 25cm (10") left, lay the new end along the top of the outside coil and catch it in with the next few stitches.



To finish off coiling, decide exactly where you want to stop—you may have to make the coil even, if you are working in bands of colour. Cut the core for the end and then shave the end to a point.

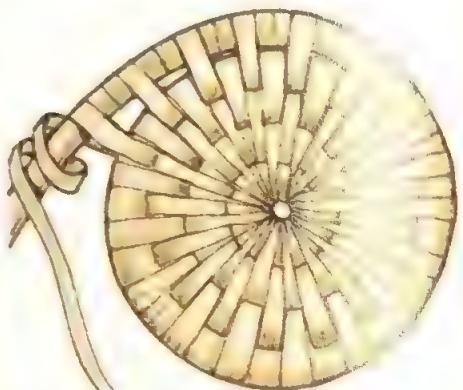
Continue to stitch in this end as far as possible and then bind in the short point with single whipping stitches. Thread the end of the raffia back into the work and cast off with a couple of stitches backwards and forwards.

The stitches

There are many different stitches—some are very simple and quick to do, others are more intricate. It is the choice of stitch with the core which determines whether the work is soft and flexible or so hard and rigid that it is almost waterproof. If a piece of work needs to be hard and rigid use a cane core and figure of eight stitch.

Lazy Squaw stitch

Beginners would be well advised to start off with Lazy Squaw stitch (fig.4).



4. Lazy Squaw stitch.

As its name implies, this is a typical stitch from the North American Indian tribes and it is both easy and economical.

□ After the cane has been wrapped and joined into a ring continue by wrapping the raffia round the new coil two or three times.

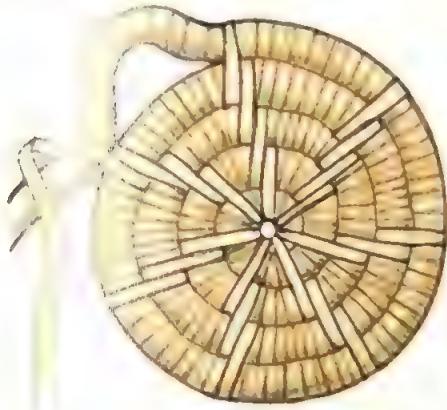
□ Pass the needle through the centre of the ring and up over the new coil.

□ Continue working in this way, always wrapping the raffia round the new coil before passing it once round the first coil.

□ In the next round, the stitches will be taken round the new core and into the spaces formed by the second round. As the coil gets bigger, more stitches will be required. These can be added either by making an extra wrap round the new foundation, thus keeping all the long stitches in orderly lines, or by adding more long stitches between those of the previous round.

Straw forms the core of this base.

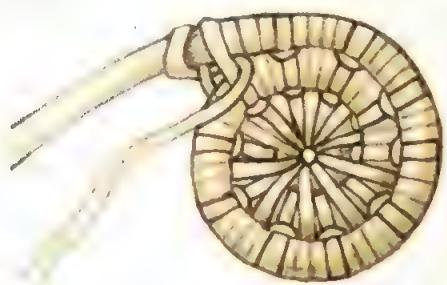
You can vary this stitch by passing the raffia into the previous round every other stitch. Alternatively, you can wrap the new coil for 5cm-7.5cm (2"-3") and then make open-work patterns by looping the coil (fig.5) before stitching it to the previous round. Be careful always to keep the free loops exactly the same length. Catch the tops of the loops in with a straight round afterwards. This method can be used to make handles on baskets. To secure and strengthen the handle make additional stitches at the loops.



5. Looping the core forms open-work.

Mariposa or knot stitch

Many beautiful patterns can be built up using Mariposa or knot stitch (fig.6).



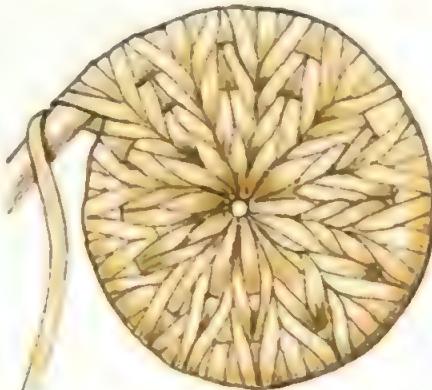
6. Mariposa or knot stitch.

□ After the foundation ring, work one round of Lazy Squaw stitch.
 □ On the next round take the raffia into the previous round and up over the new coil. Bring the needle to the front, to the left of the long stitch just made, and down between previous round and the new round. Wrap the raffia two or three times round this 'shank', that is the long stitch, then continue wrapping the new coil. The shank can be pulled tight down to the previous round or can be allowed to stand away for approximately 6mm (1") for open-work.

□ On further rounds, the shank can be placed directly over the previous shank or may be put exactly in the centre of the space or, put slightly to one side, or each side of the previous shank.

West African stitch

West African stitch (fig.7) is a variation



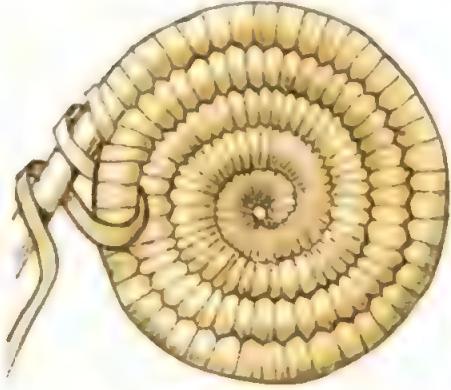
7. West African stitch.

on Lazy Squaw stitch.

— Start with a round of Lazy Squaw stitch that has every other stitch going into the previous round.
 □ Make the first stitch into the previous round and one wrap round the new coil. Then make a second long stitch into the previous round in the same place as the first one. This will form a V-shape.
 □ On the next round the points of Vs are worked into the centre of the previous Vs. Extra stitches are added if necessary by working a stitch between the Vs every so often, as well as in the centre.

Figure of eight stitch

This stitch (fig.8) gets its name from



8. Figure of eight stitch.

the pattern of working which is in the form of a figure eight.

— Bring the raffia up through the foundation ring between the two cores and up behind the new coil. Pass it down and behind and through the ring again. This counts as one stitch.
 □ In the next round, the raffia is passed round the new coil and the previous round so that each coil is covered twice.
 This method produces an extremely firm basket and, if worked with a cane or willow core, the work is very strong. This stitch is, however, much slower to work than Lazy Squaw stitch.



Colourful mats in Lazy Squaw stitch designed by Barbara Maynard.

Printing with paper shapes



Printing with paper shapes is a form of relief printing using paper or cardboard cut-outs covered in paint or ink which are printed on paper.

This forms an image that can be built up by further applications of paper cut-outs and paint. At its simplest this is an easy process and a delightful entertainment for children, but it can also be developed, using skill and colour sense, to make sophisticated prints.

The process lends itself particularly well to a bold conception of design expressed in areas rather than line. In

consequence colour becomes a dominant feature.

The greatest advantage of printing with paper shapes is that no elaborate equipment is required. It is a technique that can easily be attempted in the home by all age groups.

The design

Most important is to select a suitable design. Subjects relying on fine detail should be avoided. Simple scenes and

'Eclipse' by Ann Marie LeQuesne was printed with inked cardboard shapes.

A design can be built up by printing one coloured paper shape over another.

still life designs make good starting points. You can produce distinct outlines by cutting the edge of the paper shape or more blurred ones by tearing it.

Grainy and textured paper cut-outs will give the design greater interest. The surface of the paper on which you print can also make a vast difference to the design.

Printing

Before embarking on any project, experimentation and practice are essential. Using different paper and card you will find you obtain all sorts of different results.

Any scrap or waste paper can be used for your cut-outs and various textured papers can be used as printing blocks.

You will need:

Paints (water colour, gouache or poster colours or ink).

Thin card or cartridge paper or strong, thick scrap paper.







Kim Sayer

Brushes or small pieces of sponge.
Small roller.

Good quality paper for printing.

Having decided on your design, cut or tear the shapes you will need from the thin card or cartridge paper.

The picture should be built up in stages. Decide on the most important areas both in terms of colour and design and print these first.

Cover one side of a paper shape with paint. Keep the paint fairly liquid and work quickly, otherwise the paint will dry before it has been printed.

Place the wet shape, painted side down

These two relief prints, Seaweed (left) and Stony Beach are by Lynne Moore. Ink was used as a printing medium.

on to the printing paper. This is the tricky part and requires both care and accuracy. If your shape is too wet you can easily blot the design and ruin the whole picture.

Take a second piece of clean paper and place it carefully over the shape without moving it, then firmly roll over it a few times. Remove the paper and cut-out carefully and the first part of your design will be revealed.

Build up the design piece by piece. Before printing a second piece make sure the paint from the first piece is dry, this may necessitate blotting it. By putting several colours on one shape or printing them over one another all sorts of random effects can be achieved. The leaves in the picture illustrated (page 2679) were printed by putting several colours on in these ways. With careful use of colour it is possible to build up one shape on another. Mistakes and misprints can sometimes be remedied by overprinting but normally you must start again.

Inks for craft work



Many different inks are available from artist's suppliers and are specially made to suit a particular purpose.

Drawing ink

Drawing inks are divided into two categories—waterproof and soluble. Both types can be used for drawing and calligraphy but have particular qualities which are suitable for producing different effects.

Waterproof drawing ink. Line drawings done with waterproof drawing ink will stand up to washes of water-colour, ink or felt-tipped pen without disturbing the line underneath. This is useful when making a line drawing to which you will want to add some colour or tone later.

Coloured waterproof drawing inks such as Winsor and Newton Drawing Inks give very rich translucent colours and can be used to build up layers of different washes. The layer underneath will not be disturbed by a wash of another colour provided it is allowed to dry first.

Indian ink is the best black waterproof ink to use for drawing and writing. It gives a clear crisp line, a dense jet black colour, smooth flow and good washes. It is made from burning various substances such as leaves and plant seeds and mixing the carbons thus produced with a medium. Indian ink originally came from China. It is called Indian ink because it arrived in Europe from China by means of the East India Trading Company.

Chinese stick ink is made in the same way but the pigments are moulded into a solid stick which is then ground and mixed with water to produce ink.

Indian ink should not be used in a fountain pen as it will clog the nib. Instead, use a nib and pen holder.

Soluble drawing ink is better to use when a softer line or smudged effect is required. A line drawing in soluble ink can be softened by rubbing over it with a wet brush and then blotting with blotting paper. A wash made over a line drawing in soluble ink will cause the line to smudge—an effect which may be desirable.

Chinese stick ink (described earlier) when ground and mixed with water makes a very fine soluble ink. It is also

used to make wet rubbings—a technique similar to brass rubbing and described in Printing chapter 6, page 358.

These inks can be used in a fountain pen which is a far more convenient drawing tool than a dip pen.

A modern substitute for drawing inks are the many types of felt-tipped pen which come in a wide range of colours, are easy to use and very quick-drying. Waterproof and soluble inks should be used on good quality cartridge paper. As well as pens, Japanese brushes and sable water-colour brushes can be used.

Printing inks

The many types of printing have led to the development of a variety of printing inks.

Relief printing. This covers anything involving inking up a block which is pressed on to a surface to leave an impression of the raised areas of the block, such as lino cuts or wood cuts.



A selection of coloured drawing inks.

Paul Kemp

This category also covers commercial printing.

For relief printing an oil-based ink is used. This is made from pigments mixed with oil and varnish to produce the required consistency. The consistency depends on the type of paper being used. This is important in commercial printing but for most craft purposes a rather thick, glutinous consistency will be required.

Relief printing inks are available in black and a range of colours. Some of the colours are less permanent than others, depending on the pigments used. The magentas, reds, purples and some blues tend to fade. These inks can be mixed with a medium called transparent white (in fact a pale brown colour) which will make the inks transparent without altering their colour. This enables the printer to overprint one colour on another and produce a third colour.

Water-based printing inks are also available but are not so easy to use as they tend to dry too quickly. They are useful however for printing with potato cuts. The water in the potato reacts with an oil-based ink and will not print successfully.

Etching ink differs from ordinary relief printing ink. It is made from a mixture of pigments and burnt linseed oil. This can be bought ready mixed from suppliers, but most professionals prefer to buy the powdered pigments and burnt linseed oil and mix the ink as and when they need it.

Screen printing is such a widely used technique and on so many different materials that several different inks are available.

Poster inks are oil-based inks which are used for screen printing on most types of paper. They come in matt, semi-matt or gloss.

Enamel inks are used on metal, ceramic, glass and plastic and because they are so thick, they leave the colour embossed on the surface.

Vinyl inks are used for printing on vinyl.

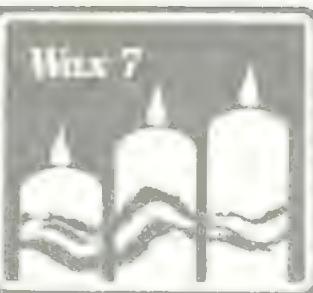
Acrylic inks are used for screen printing on polystyrene, acetate and other plastics.

Other types of screen printing ink such as metallic and fluorescent are also available.

Fabric printing inks. It is possible to use ordinary relief printing inks on fabric but some are not completely waterproof and others tend to make the fabric go hard.

Fabric printing inks soak well into the fibres of the fabric and are waterproof. They can be applied using a printing block or a paintbrush. They do tend to make the fabric go slightly stiff and if this is to be avoided it may be better to use cold water dyes.

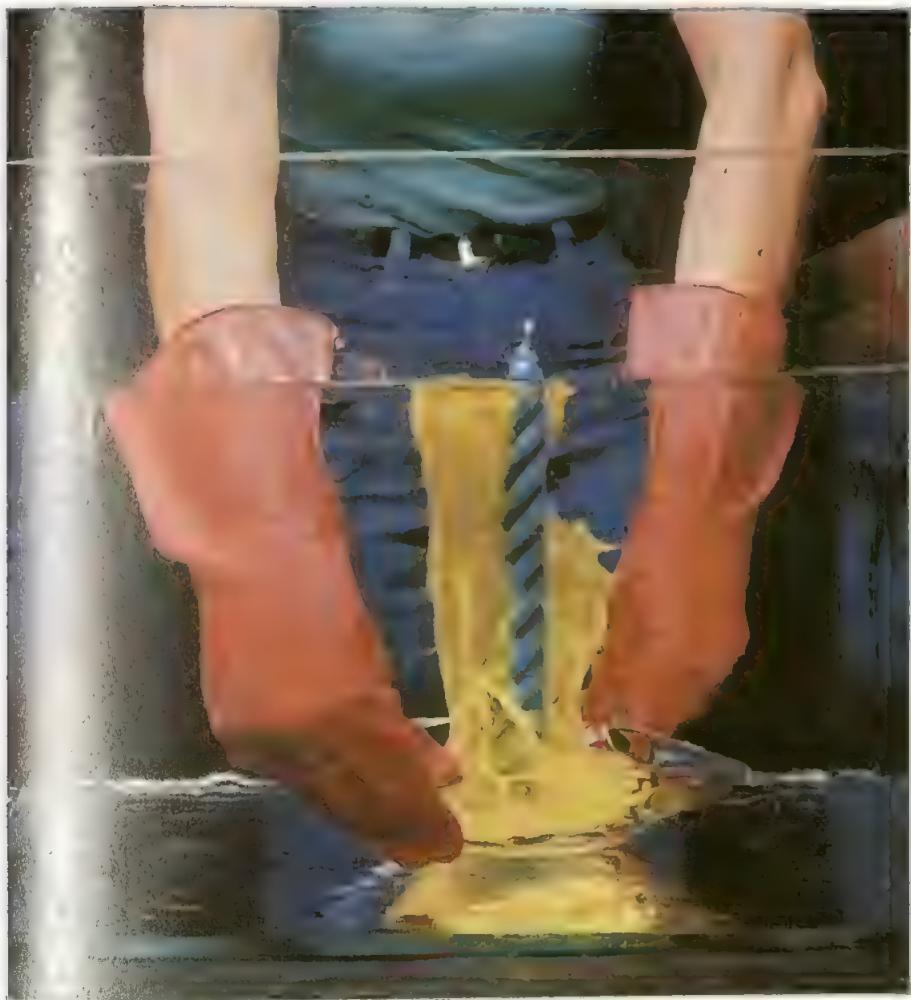
Water and ice candles



Highly original results can be achieved by combining the unlikely elements of hot wax and cold water or hot wax and ice. Hot wax, plunged into cold water, will set in an intricate and irregular-shaped entanglement of wax. By pouring hot wax over chunks of ice, irregular cavities will be formed in the wax.

Both methods require the use of an inner core candle on which to build the





finished shape. By varying the colour of the core candle and the wax, particularly unusual and colourful effects can be obtained.

Water candle

Water candles are made simply by plunging hot wax into cold water. As the wax forces its way upwards in an attempt to float, it sets in a delicate webbing.

Neither paraffin wax alone nor a paraffin wax and stearin mixture work very well for this method as the wax sets too fast and the finished result tends to be brittle. The addition of 5% plastic additive—available from candlemakers' suppliers—gives the wax a tensile strength and also prevents it from setting quite so quickly.

You will need:

100gm (4oz) paraffin wax.

Wax dye, preferably in solid disc form. 5gm (½oz) plastic additive.

Core candle approximately 20cm (8") high and 2.5cm (1") in diameter.

Saucer or shallow dish—the depth and circumference of the dish will determine the span of the webbing.

From left to right: ice candle within water candle; ice candle; two water candles. Designed by David Constable.

The dish containing the core candle and hot wax is plunged into cold water.

Saucepan.

Sugar thermometer.

Rubber gloves.

Basin of cold water.

Melt the paraffin wax in a saucepan and add wax dye to obtain the required colour. (For information on using wax dyes see Wax chapter 1, page 52.)

Pour a little molten wax into the dish and set the core candle upright in it.

Add the plastic additive to the molten wax in the saucepan and heat to 99°C (210°F).

Fill the dish with the wax mixture at a pouring temperature of 99°C (210°F).

Wearing rubber gloves, push the dish into the basin of cold water. Give it a quick twist as it goes down in the water to give a little movement to the finished shape of the candle. The hot wax will rise up around the core candle.

If you are not satisfied with the result of your first attempt, you can melt the wax down and start again.

Warning. Be particularly careful when melting this wax down as water may be trapped in it. If the wax reaches the boiling temperature of

water, the water will boil, sending hot wax spluttering out. Be extremely careful to heat the wax gently. As soon as it has dissolved, remove it from the heat and allow the wax to congeal. The water will stay on the bottom of the pan. Remove the wax from the pan and dry with a tissue. The wax will then be ready to use again.

Ice candle

Ice candles can be made using any kind of mould but it is advisable to use a transparent mould to start with, as this will enable you to see where the ice is and how the process works.

The quantity of paraffin wax required depends on the size of the mould used. A core candle is used inside the mould to prevent any water from getting trapped near the wick which would otherwise put out the candle when lit. Insert a core candle—at least 1.5cm (½") in diameter and about 1.5cm (½") shorter than the length of the mould—centrally and upside-down into the mould.

Thread the wick of the core candle through the wick hole of the mould, but do not seal.

If the finished candle is to have large holes in it, lumps of ice should be packed around the core candle. If a more delicate, lacy effect is desired, pack the mould with crushed ice. (To crush the ice, put it in a polythene bag and hit it with a hammer.)

Do not pack the ice down too tightly or the wax will not travel the full length of the mould.

Fill the mould with wax at a pouring temperature of 104°C (220°F). The wax will travel through the ice.

When the finished candle is removed from the mould, the ice will have melted, leaving a series of holes in place of the ice.



The mould is packed with crushed ice round a core candle and filled with wax.

Rugs with a flat weave



The basic principles of rug weaving are very simple but the way in which colour and design can be used means that the whole area of rug weaving is immense. Flat woven rugs have not received the recognition and attention that pile rugs have and, because of this, they have stayed closer to their functional role as floor, wall and bed coverings. The arrangement of colour in flat, striped rugs or intricate Kelims described here allows considerable freedom in the creation of objects that are at once functional and decorative.

Looms

The equipment needed to weave such rugs can be very simple. Nomads, such as the Bedouins, weave on a horizontal ground loom where the warp is wound in a figure of eight around two poles that are tied to four pegs in the ground. A loom very similar to both this ground loom and the tapestry loom is the vertical rug loom. The warp is stretched between two beams, either by winding or between nails, and, on some models, is tensioned with tension screws. This loom has no reed or batten and the shed

mechanism is the simple stick and leashes technique shown in Weaving chapter 11, page 856. On some models the beams revolve to allow the warp to be pulled around as in the inkle loom (see Weaving chapter 15, page 115).

Because the weft has to be beaten down by hand, the resulting rug tends to be soft in construction and therefore weak. To overcome this problem, a more sophisticated loom is available which has its own reed and batten for beating down just like a table loom.

This type of rug loom is much more useful because in addition to producing a stronger rug it allows the warp to be stored. The warp is wound on to the top beam and the rug is wound on to the bottom one as it is woven. With the two revolving beams, the tension is easily controllable and the length of the rug is no longer limited as it is with a fixed frame.

The most common rug loom has the two beams operated with ratchets, two shafts lifted by pedals, a batten and a reed. Both the wide width table loom and the horizontal floor loom can also be used to weave rugs. They have the advantage of a number of shafts and the obvious versatility of being able to weave other fabrics. However, such looms are expensive and take up a lot of space. The vertical rug loom does not need much space and, in addition, the overall pattern of the rug can be seen as it is woven. Also, if you are weaving a tapestry-type rug and working small areas by hand, it will be as quick as weaving on the largest most sophisticated of floor looms.

Materials

When making a flat rug it is very important to select the right yarn so that the final piece will be both attractive and strong.

The **warp** is usually completely covered in rugs as it is in tapestry but, nevertheless the warp directly affects the final appearance of the rug. It is essential that the warp is strong as it will be stretched very tightly and beaten down upon heavily.

Cotton is often best for the beginner as its elasticity gives the weaver some leeway if the warp is not perfect. It may need to be dyed as the hard white in the fringe will not always suit the rest of the rug.

Ordinary rug wool can be used as long as it is not too fluffy and has been tightly twisted.

Linen has a natural beige colour that blends in well with other colours and the fibre rigidity gives the rug stiffness. Its disadvantage, as with tapestry, is



Rug loom with revolving beams, but no foot pedals, set up for action.





A sensitive use of colour creates the interest in this simple striped design. Designed by Jane Moran.

that it is easily distorted and will sag and cause problems in the tension unless the weaver is very experienced. **The weft.** In the weft many materials can be used. Wool, cotton, jute, flax, rushes, rags will all give different textures and qualities to the rug. Weaving is, after all, a three dimensional art and the texture is very much part of the design.

Wefts can be tie-dyed or dip dyed to give random effects and unusual colours. They can be used singly if they are very thick, eg 6-ply wool, or doubled, trebled or even quadrupled if they are fine eg 2-ply wool. This enables the weaver to experiment with colour and texture.

Subtle shading can be achieved by using rug wool quadrupled and varying the amounts of light and dark threads in each multiple strand.

The materials that make a rug should obviously relate to its end use. Whether it is a bathroom mat or a kitchen rug, for the front door or the fire place, will affect whether it needs to be washable or not, heavy or light weight.

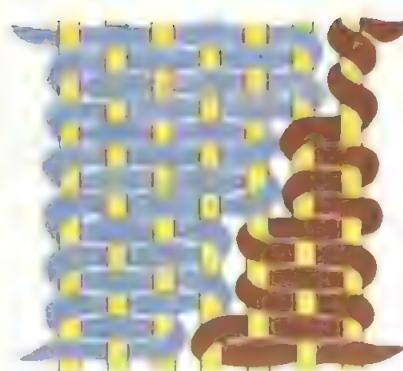
Sett. The number of ends per 2.5cm (1") depends on how heavy or light the final product is going to be. It usually goes from about 3 ends per 2.5cm (1") up to 8 for the fine Kelim rugs. Some weavers prefer to use a fine reed and sley the warp double in every other dent: for instance, a 6 ends per 2.5cm (1") reed which when sleyed double makes in actual weaving terms 3 ends per 2.5cm (1").

This can be very useful in the selvedge where every dent can be used making a close sett and heavy weave at each edge. If the warp is only used single, the last 2.5cm (1") must be doubled for a firm selvedge. If the selvedge is good you will not have to oversew the sides of a rug to prevent them from buckling.

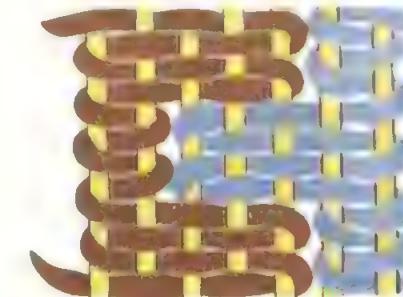
Stripes

By weaving from side to side with different colours in the weft, you can produce simple horizontal stripes. This is the easiest way of producing a pattern and many rugs, such as woven cotton rugs, just have simple weft stripes in different colours and proportions.

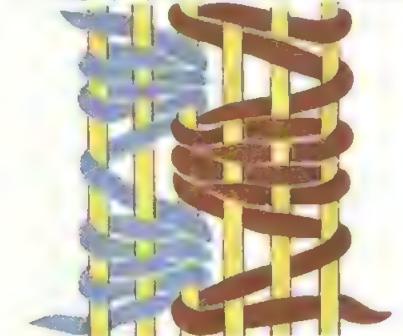
Vertical stripes. If two colours are used alternately, one pick A, one pick B, they will give thin vertical lines (see Weaving chapter 8, page 632). The width of these lines will depend on how many ends per 2.5cm (1") there are in the warp as each weft thread will be passing over an alternate set of warp threads. Though this is a very simple technique there may be diffi-



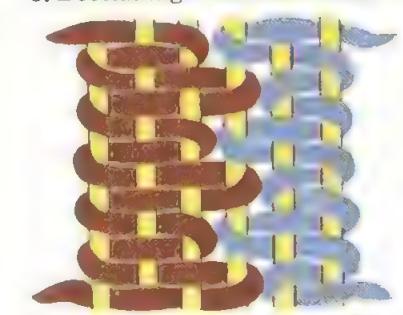
1. Stepping to avoid long slits.



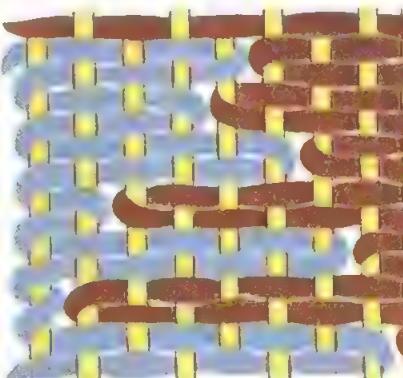
2. Long upright joins must be bricked.



3. Dovetailing is another solution.



4. Zigzagging is simple and effective.



5. Hatching gives a shading effect.

Coral Mula

culties as the selvedge may not weave in (see Weaving chapter 8, page 632). Bigger stripes can be made by passing the weft over and under more than one warp end. To do this, put a shed stick into the warp, passing it over the groups of threads that will form the design areas and under the remaining ones. Raise the shed stick and weave one pick.

The next pick should be in plain weave, and can be another colour to give the rug strength and define the pattern. Repeat alternately the pattern shed and the plain weave so that the stripes are built up from long floats in every other pick.

Tapestry rugs

In rug making there is far greater scope for design if the weft does not run from selvedge to selvedge but works within small areas as in tapestry. In fact, there is a whole area of rug-making that is just that—tapestry rugs. Kelim rugs are the best known of all tapestry woven rugs. The characteristic of such rugs is the small slits left at the meeting place of two colours (see Weaving chapter 9, page 652). This technique of joining two areas of colour is extremely widespread and rugs like this are made in South America, Romania, Sweden and the Middle East where the most famous examples are found.

In Kelim rugs, the slits must be no longer than 2cm ($\frac{1}{4}$ ") and to avoid long slits the diagonal stepped pattern of tapestry must be used (fig.1). If long vertical joins are needed they are bricked (fig.2), dovetailed (fig.3) or zigzagged (fig.4). Eccentric wefts are sometimes used to outline areas or where circular shapes are required (see Weaving chapter 18, page 1526).

If Kelim techniques are not used then the tapestry methods of interlocking two neighbouring colours can be used. Alternatively, you can use hatching.

Hatching can be used to grade from one colour to another (see Weaving chapter 10, page 824). In rugs, hatching can be used as a design feature in its own right giving a pattern in an intermediate shade (fig.5).

Inlay. Inlay is a technique frequently used in Sweden where it is called *slarvtjäll*. It gives the rug a slightly raised effect without going into knots and pile. It can be used to pick out small areas of central interest in the rug as was done in the plain weave cushions (see Weaving chapter 32, page 2626).

Two wefts are needed for this with a softer, bulkier material for the inlay design and the coarser one for the background.

Open the shed as for a plain weave pick and secure pattern weft on to a warp

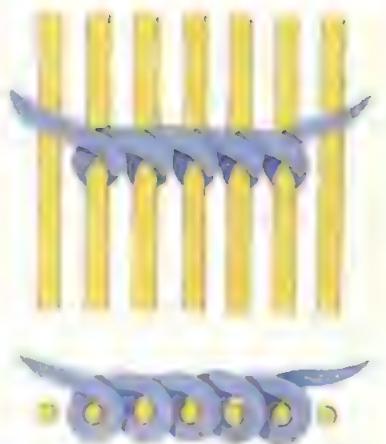
thread on the bottom layer. Pass it over the raised shed for as many threads as the design requires then turn it round another bottom warp to hold it down. Pass the ground weft through the shed and beat down.

This technique is only really suitable for spot or diagonal patterns as otherwise there will be problems with the floats. To achieve a blurred design, the pattern weft can simply be placed in the same shed as the ground weft.

In either case, extra rows of plain weave will have to be done to compensate for the thicker inlay weft.

Soumak. This is a very ancient technique (it was used in the cushion in Weaving chapter 11, page 856). It is a form of weft wrapping and is an ideal technique for adding textural areas to a flat rug. Different effects can be achieved by increasing the number of threads over which the wrap is made and those it goes under: 2/1 (fig.6) is the most common but 4/2, 6/3 or even 9/3 are all possible. Do not forget to strengthen the rug after every row of soumak with two rows of plain weave to bind it in.

Sampler rug using all the different techniques and woven in strips on a small loom. Designed by Jane Moran.



6. Soumak, straight and cross-section.



7. Insert first colour for skip weave.



8. Second colour covers other threads.

Soumak acts almost like a row of embroidery on the surface of your rug. **Skip weave.** This is a hybrid method that uses finger techniques without really being a tapestry technique as the weft is taken from selvedge to selvedge. Floats are made on the back and the technique is suitable for building up irregular designs such as spots, triangles, blocks etc.

Open a plain weave shed and using your hands, pass the weft thread over those back threads which you wish to be covered with that colour and behind those where you do not wish the colour to appear (fig.7). Using your second colour, introduce it into the same shed but this time reverse the process by covering those back threads previously uncovered and going behind those that were covered by the first colour (fig.8). In this way the two weft threads in each shed can pick out blocks in different colours.

Care must be taken that the floats on the back of the rug do not get too long and if this is happening spots or lines must be introduced into your block.

It is very useful to use graph paper to block out the design when using skip weave. In this way each square represents one warp and you will know which warps to cover with each colour.





Jerry Tubby

Creative ideas 96

Seedwork ornaments

These seed-covered shapes are an excellent example of the versatility of seed decoration. Use the techniques described in Seedwork chapter 3, page 1024.

Ornaments similar to these can be made by using either life-size decoys obtainable

from sporting supply shops or, if you are feeling particularly inspired, a shape carved from a block of polystyrene.

Another idea is to use plastic toys or models from a toy shop. Should these be a colour too crude for a background to the seeds they can be painted a more suitable, solid colour with gloss paint. A subtle Chinese lacquer red would look stunning behind green moong beans.

Do not attempt to use rubber toys though — oil-based paints would damage the rubber and other paints will not adhere. Also, rubber has too much give, one false poke and all the seeds would go flying.

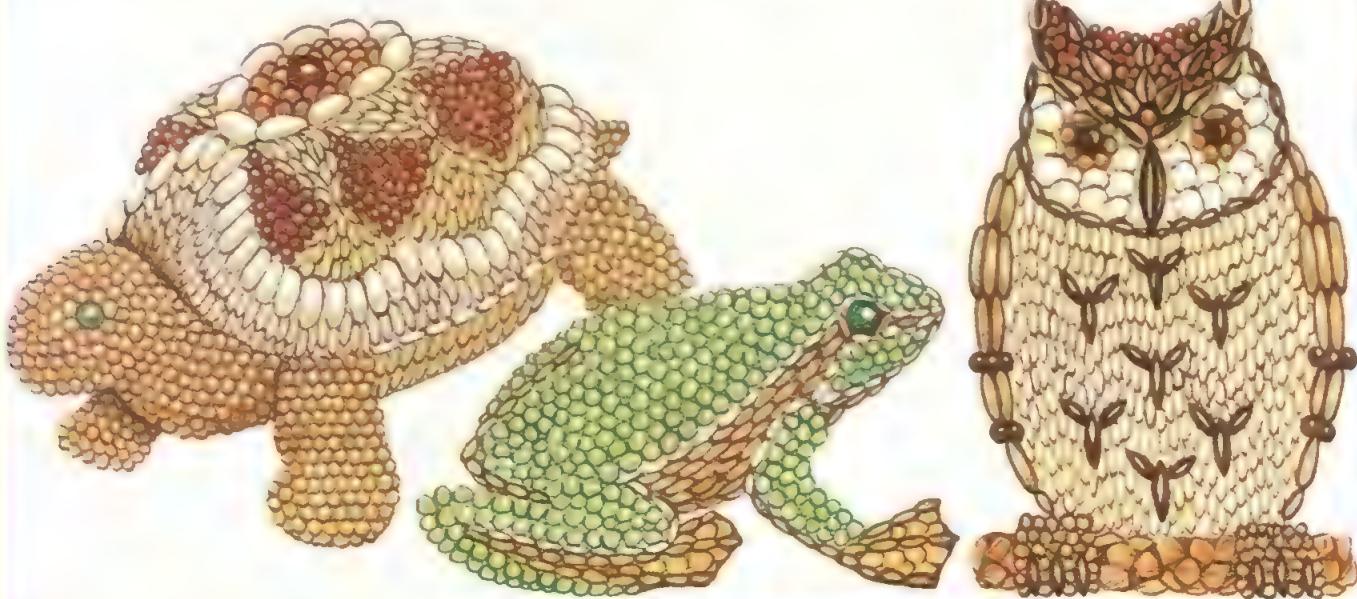
By looking through natural history books in the library or paying a visit to a museum or zoo you can study markings and either repeat them in seeds or base abstract interpretations on them.

Wooden shapes covered with colourful seeds in a variety of sizes and textures.

Glue a piece of green felt to the base of your finished ornament to protect the shelf or table on which it is placed.

Caution: do not allow children to use a gloss paint that is not lead free.

You need not be restricted to ducks—here are some more possibilities.



Coral Mills

Raku pottery

Clay 57



Raku has its origins in 16th century Japan. It is a type of pottery fired at comparatively low temperatures between 800°C and 950°C (1472°F and 1742°F). It has a soft glaze and a refractory body able to withstand thermal shock. In order to make the body capable of withstanding this sudden change in temperature, approximately 30% of grog is added to the clay. It was Ameya, a Korean potter who settled in Kyoto in 1525, who made the first Raku ware. When he died his wife

Teirin made excellent tea bowls, but when her son, Chojiro, was presented with an engraved gold seal in 1598 bearing the idiom 'Raku', he became officially the first of the line of Raku potters. This line has continued until the present day and the most recent Raku potter was Raku Kichizaemon who made black Raku tea bowls in Kyoto, specifically for the ritual of the Japanese tea ceremony. Because of the coarseness of the body and the requirement to stand up to

sudden changes in temperature, Raku ware is naturally thick. It is this thickness that makes it a poor conductor of heat and therefore ideal for the tea bowl, which is held in both hands and does not have a handle.

About the middle of this century, American and English potters became interested in the technique, and developed the idea, moving away from the traditional methods of making and decorating practised for so many years in Japan. This fast-fired, low temperature, coarse textured pottery is now referred to by the encompassing title of 'Raku', although daily it is moving further from the original Japanese intention.

Today, Raku is practised on three levels. One: by the serious potter who

The ancient art of Raku is still enthusiastically practised by modern potters: these examples are typical Raku drinking vessels which can be used immediately after firing.



uses the unique qualities to express his own personal ideas and intentions. Two: as a means of education whereby the speed of the process allows the student to encompass the total ceramic idea in a shorter space of time than is normal. Thirdly, as a focal point for pottery students when they are having an end-of-term party or social get-together, because Raku drinking receptacles can be used immediately after firing. If the third category seems frivolous, it should be remembered that it was at a party of intellectuals in 1911 that the famous British potter Bernard Leach decorated a Raku pot and so began his immense interest in ceramics. Who knows how many more people will take up a life-long interest in ceramics as a result of attending a Raku party?

Before embarking on a Raku firing, ensure that you have a suitable space out of doors on which to build a temporary or permanent kiln. And always allow sufficient time in which to biscuit fire pieces, glaze them and allow them to dry before subjecting them to the sudden heat of the Raku kiln: otherwise the pots will break.

The kiln

Ordinary house bricks can be used for this but, with the intense heat generated, they tend to melt. It is also essential that they are dry because tightly packed bricks can shatter when steam is generated inside them. A better idea, especially if you propose to keep the kiln as a more or less permanent structure, is to buy well-made fire bricks from a builder's yard. No cement is required and the kiln can be put up quite quickly.

Safety note: on no account use blue engineering bricks which will burst and fly about.

A chimney is not necessary in this particular kiln because the Calor gas does not need a forced draught.

You will need:

At least 64 bricks, preferably fire-bricks.

4 kiln shelves, each 45cm x 30cm x 2cm (18" x 12" x ¾").

7 broken pieces of kiln shelf.

About 60cm (2') iron wire.

Two insulating bricks (optional).

From a Calor gas dealer:

1 Part L (handle) 2075.

1 Part P (engineer's burner) 2075 for the flame gun.

1 regulator 1991P.

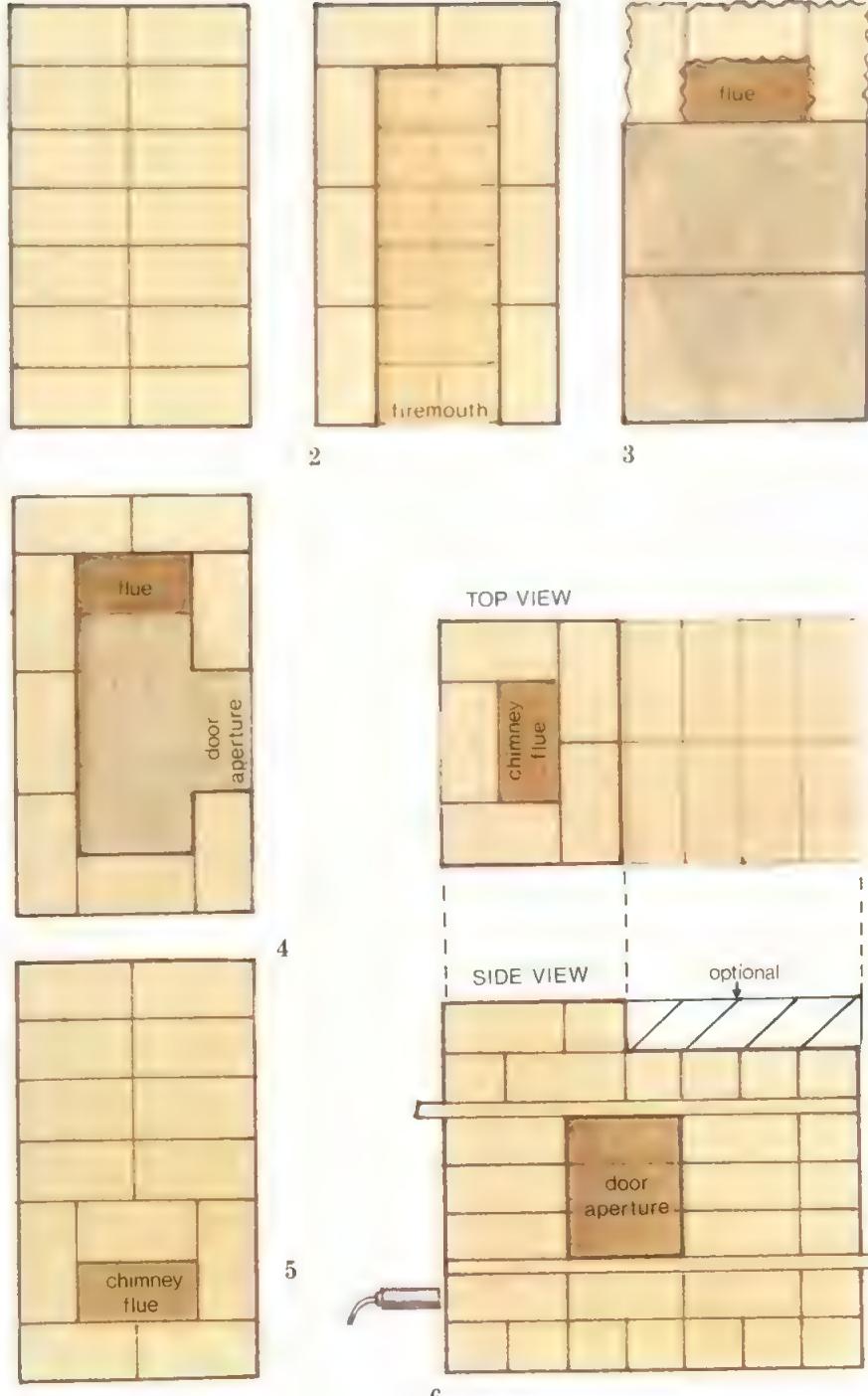
3m (10') high pressure hose.

2 hose clips. Spade.

14½kg (29lb) bottle propane gas.

Choose a corner in the garden away from the prevailing wind.

Use the spade to make a flat, horizontal area, about 2m x 3m (2yd x 3yd) on which to build.



- Lay out 14 bricks (fig.1).
- Lay out 8 bricks on top of and around the edges of the 14 (fig.2). An additional layer may be added for more height (see kiln overleaf).
- Put the two kiln shelves in place; place them one behind the other, leaving a small open space towards the back of the kiln (fig.3).
- Place the three broken pieces of kiln shelf (see fig.3) to act as spacers.
- Add 8 more bricks around the edge, leaving an aperture of the length of one brick to form the door opening (fig.4).
- Add two more rows of 8 bricks.
- 1. The ground layer of a Raku kiln.**
- 2. Building up the sides.**
- 3. Placement of shelves.**
- 4. Making the aperture.**
- 5. Covering the top.**
- 6. Top and side view.**
- Put the other two kiln shelves in place as before, but this time at the other end of the kiln.
- Place the next three pieces of broken shelf to act as spacers round the flue at the other end of the kiln as before.
- Place 13 bricks on top of the kiln shelves in the pattern shown in fig.5. This will create the chimney flue.
- Place 5 bricks, as shown in fig.6, to

increase the height of the chimney flue. (Eight more may be added for a flat top, see fig 6.)

Place the last piece of broken kiln shelf over this flue—by moving it to and fro you will be able to adjust the aperture, making it smaller to increase the heat and larger when the kiln is thoroughly warmed.

An over-sized kiln shelf, pushed flat against the opening and backed by bricks to prevent the heat escaping, will do very well as a door. Alternatively use two insulating bricks.

Screw up the iron wire into a bird's nest shape and stand it 15cm (6") inside the kiln so that the flame from the gun makes it red hot. If by any chance the flame blows out in the early stages of the firing, this red hot wire is sufficient to re-ignite the gas.

Assemble the flame gun according to the manufacturer's instructions that come with it.

Arrange the flame gun so that you will be able to insert it into the mouth of the kiln.

Place the gas cylinder well away from the kiln and cover the high pressure hose so that people will not trip over it accidentally and pull the lighted burner from the kiln.

Raku ware

This will make about two dozen pots. You will need:

About a bucketful of white ball clay.
About half a bucketful of medium grog.
1.36kg (3lb) alkaline frit.
1kg (1½lb) standard borax frit.
113gm (4oz) bentonite.
28gm (1oz) tin oxide.

28gm (1oz) copper carbonate.
Regular kiln in which to biscuit fire the pieces.

Mix the clay and grog thoroughly.

Make the Raku pots by the pinching method or by the turning method. Remember that the pots should be about 6mm (¼") thick.

Biscuit fire the pots to 960°C (1760°F), prior to Raku firing.

Transparent glaze. Mix the alkaline frit, borax frit and bentonite with water until it is the consistency of thickish cream.

White glaze. If you wish to make a white glaze, separate one third of the bulk glaze and stir the 28gm (1oz) tin oxide into it.

Turquoise glaze. If you wish to make a traditional turquoise glaze, halve the remaining bulk glaze and stir the copper carbonate into it.

Dip the pots into the glaze some

time before the firing, and allow to dry. It is essential that the glaze is applied thickly and that the pots are allowed to dry out before the firing. If they do not dry out completely, the intense heat of the firing will cause a sudden evaporation of steam which will shatter the pot into small pieces.

Once the firing has begun, it is wise to stand the glazed pots on top of the kiln so that they can benefit from the escaping heat.

You will need:

The glazed pots.

The kiln.

Pair metal tongs.

Pair stout gloves.

Bucket of cold water.

Heap of dry sawdust.

Old dustbin lid.

Light the gun and turn it on to a low pressure so that in the beginning only a gentle heat is generated.

Put the gun into the kiln mouth, pointing slightly downwards so that there is less chance of cracking the kiln shelves.

The firing

You should begin to heat the kiln about two hours before you want the firing to begin.

After half an hour, turn the gas up to medium pressure.

After an hour, turn the gas up to full pressure.

Within another half an hour the kiln will be glowing red hot and ready to take the first pots.

Open the kiln door carefully by taking away the shelf or bricks which cover the opening.

Pick up a dry pot with the tongs and place it inside the kiln.

Continue to do this until the kiln is full.

It is quite proper for the Raku pots to touch, or even to stand on top of each other, for when the glaze is molten and treacly there is no problem in separating one from another. However, you may encounter difficulties if you put a small pot inside a larger one.

When you have packed the kiln, close the door.

The melting time of the glaze will vary, depending on how cold the day is, how strong the wind and how high the gas pressure. Keep looking through one of the cracks in the door and you will be able to see when the glaze has become molten and shiny, possibly within a very few minutes.

When the glaze is ready, remove the door.

Grasp a red hot pot firmly with the tongs and remove it from the kiln.

Here two bricks are used to seal the aperture of the kiln during firing. Note the use of the flame gun (lower left).



Put the pot on to the heap of dry sawdust.

The sawdust will ignite and make a lot of smoke.

Put an old dustbin lid over the pot on the sawdust.

After about fifteen minutes, remove the lid and put the pot into the bucket of water.

Give it a good scrub with a soft brush.

If you have used the turquoise glaze, this method can bring about some very exciting lustre effects. The areas of glaze which have been buried in the sawdust will be reduced back to copper metal, and will take on a silvery lustre.

If you have used the white or transparent glaze and have applied it partially, the unglazed areas will be blackened with carbon, the glaze will craze, and the black carbon will enter into this crazing, making a naturally decorative effect.

Some of the nicest Raku pots have this very simple treatment.

As soon as the kiln is empty, you can return it with another batch of pots.

An alternative method is to remove the pot from the kiln and plunge it directly into cold water.

Other effects

If you are good at decorating with a brush, take a pot that has been dipped in transparent or white glaze and, using the copper carbonate mixed with water, freely apply brush decoration. If a pot decorated in this way is given the reduction treatment in sawdust, the applied copper is likely to become metallic copper lustre in appearance. This, together with the intrusion of carbon into the pot on unglazed areas, can make a very restrained but beautiful effect. Other oxides can be used in the same way, but cobalt can intrude all over the place unless it is carefully controlled. Manganese oxide gives a pleasant effect, and so does iron oxide.

After you have fired a few pots, you will grasp the potential of the different methods of decorating. If, for instance, a wax design is painted on to a biscuit fired pot which is then dipped into white or transparent glaze, fired and transferred to the sawdust box, the ultimate decoration will be black where the wax was applied against the whitish or transparent quality of the glaze.

When you fire Raku, you must expect a different quality entirely to that achieved in a clinically clean electric kiln. The whole process of Raku is one of immediacy and excitement. No two pots are ever the same. This is how a technique that evolved more than three hundred years ago lives on in modern times.



A pinched pot is removed from the Raku kiln with a pair of tongs (above) and then plunged into cold water (below).



Herbal beer and wine



Wine and beer have been made in the home since time immemorial and, as commercial wines become more and more expensive, interest in this ancient domestic art is reviving. Almost any fruit, vegetable or herb can be used for wine making and brewing beer—even the dregs of tea.

Wine making and brewing is not only a very cheap and an excellent way of using up surplus produce, but also many people are discovering age old family recipes and inventing new delicious and exotic flavours.

A number of shops sell very adequate wine making kits and equipment. Once the initial outlay has been made it is only necessary to purchase the ingredients for subsequent batches as the equipment can be used over and over again.

Herb beer

Until very recently it was still quite common for herbal beers to be made every spring in country homes. These were given to all comers with the remark, 'This will clear your blood after the long winter'. Winter diets are nowadays as rich as those of summer and do not call for a springtime pick-me-up; but herb beers are still a refreshing drink for the first warm days. They have the advantage of being ready in a few weeks and are therefore attractive to the keen novice. Wine making demands much more patience and time.

Herbal beer is a term usually applied to beers made with herbs other than hops. The hop is however a wild herb as well as being widely cultivated for beer making.

Up to the 16th century English ale was made only of malted barley. When the hop was introduced it was referred to as a pernicious weed. Housewives, who in those days were the brewers, would make beer from local herbs or add them to the ale to give it extra flavour.

Two recipes using familiar weeds that grow abundantly almost anywhere are those for nettle beer and dandelion beer. The equipment you require for each, and the brewing method are similar.

You will need:

Large pan (sufficient to contain all the weeds collected).

4.5 litre (1 gallon) polythene fermenting vessel with a lid (a polythene bucket will suffice).

Sieve or remnant of terylene net curtain.

Wooden spoons.

Bucket or other large container.

Traditional, delicious home-made beer is simple to make from ingredients which include yeast, sugar and hops.

Beer bottles (cleaned and sterilized) and stoppers.

The equipment should always be used spotlessly clean and if possible sterilized. (Kits for sterilizing babies' bottles are useful for this.)

Nettle beer

Using rubber gloves and scissors gather fresh, young, green stinging nettle shoots. Take only the top two or three pairs of leaves. The quantity is not vital, but the shoots, not pressed down, should just about fill the brewing bucket. This will make approximately 4.5 litres (1 gallon) of beer.

You will need:

Nettles.

1kg (2lb) malt extract.

250g (1lb) sugar.

1 handful dried hops.

100g (4oz) crystal malt (broken), available from home wine and beer kit suppliers.

Juice of $\frac{1}{2}$ lemon (or teaspoon citric acid).

$\frac{1}{2}$ teaspoon salt.

Ale yeast (for quantity follow the manufacturer's instructions) available from home wine and beer kit suppliers.

Simmer the washed nettles and crystal malt in a large pan for about 40 minutes.

Put malt extract, sugar, lemon juice and salt into the fermenting vessel fitted with a good lid and sieve contents on to the washed nettles and crystal malt. A remnant of terylene net curtain is preferable to an open sieve. The nettle shoots should be squeezed by gloved hands, to extract the full flavour.

Stir the mixture thoroughly.

Make the quantity up to 4.5 litres (1 gallon) with tap water.

When cool (between 18°C-20°C or 65°F-70°F), stir in yeast according to the manufacturer's instructions.

Maintain this temperature, and keep the vessel covered.

Allow to ferment for 4-7 days. Remove the yeast from the top at intervals if necessary. When fermentation has finished the liquid looks clear and bubbles cease to rise.

Siphon beer into another clean container.

Dissolve 50g (1 $\frac{1}{2}$ oz) sugar in a small quantity of hot water. Add to the beer.

Siphon into clean beer bottles and stopper down well.

Store in a warm room for two days.

Transfer to a cool place and store for at least two weeks before drinking, though the beer will improve in flavour during the following month.

Dandelion beer

Dig up the whole young dandelion plant, flower, leaves, taproot and all. Wash carefully and remove any dead leaves.

You will need:

1kg (2lb) of dandelion plants.

30g (1oz) root ginger.

Pour boiling water over the dandelions and ginger.

Simmer them for five minutes and then use this infusion in place of nettle water in the last recipe. The hops mentioned in the last recipe may be omitted for a true dandelion flavour.

Herb wine

Herbal wines are made from an infusion of the chosen herb often referred to as herb tea or tisane. The spent herbs must be sieved out of the infusion (see Home herbalist chapter 6, page 2262). A remnant of net curtain can be made into a bag and the herbs placed in this. The bag is then pressed to extract the full flavour.

The most welcome modern adjunct to home wine making is concentrated pure grape juice. Old recipes for herbal wines usually add dried grapes, often picturesquely described as 'raisins of the sun'. Grape concentrate is a trouble free substitute and gives excellent vinosity. The variety available is enormous.

The mixture of liquids to be fermented is called the must.

Yeast

Fermentation is caused by the addition of yeast to the must. If you have been browsing through old books you will be familiar with the recommendation to float brewer's yeast on toast in the liquid—this should be avoided at all costs. A vigorous fermentation can be obtained using dried baker's yeast, but it is preferable to use a true wine yeast (available from home wine kit suppliers). There are several quick-acting, general purpose yeasts which produce reliable results. To work effectively, the yeast needs sustaining by the addition of certain salts. These are bought ready mixed as yeast nutrient (available from home wine kit suppliers). Use more or less nutrient in relation to the quantity of fruit juice you use. Follow the manufacturer's instructions as these will vary.

Yeast works best in an acid medium. Herb infusions may be low in acid. By adding the juice of lemons or oranges or crystals of citric acid this can be remedied.

Sweetener

Honey was the traditional sweetener of the herbal wine maker. In wines made with bitter herbs the dual taste of the sharp leaf or flower and the soft sweetness of honey is a gastronomic delight. Whenever you can—use honey in place of sugar to sweeten your wine. The wine is then called a melomel.



Equipment

The basic equipment needed for home wine making is extremely simple and costs very little. Some of the items may already be in the home.

You will need:

9 litre (2 gallon) boiling container.

9 litre (2 gallon) plastic pail with a lid.

4.5 litre (1 gallon) fermentation and storage jars.

Airlock for each fermentation jar.

Plain bungs to fit the fermentation jars for storage.

A siphon tube at least 1.2m (4') long.

Wine bottles.

Corks.

Corking tool.

Nylon sieve—at least 152mm (6") diameter.

Funnel—at least 152mm (6") diameter.

Do not use any equipment made of iron, steel, copper and brass as these will spoil your wine.

In all wine making it is essential to keep equipment clean and sterile.

The method for all the recipes given here is basically the same.

Dandelion wine

Pick the dandelion flowers on a warm, sunny morning. Shake out any small insects. Then holding the yellow petals with one hand, twist off the calyx and stem. These are too bitter for wine and should be discarded. Fig.1 shows calyx.

Ingredients and equipment, including corking tool, used for home wine making.

You will need:

About half 2.5 litre ($\frac{1}{2}$ gallon) bucket of flower petals—not pressed down.

$\frac{1}{2}$ can grape concentrate (can grape concentrate refers to the size sold to make 4.5 litres (1 gallon) wine).

1 lemon, 1 orange.

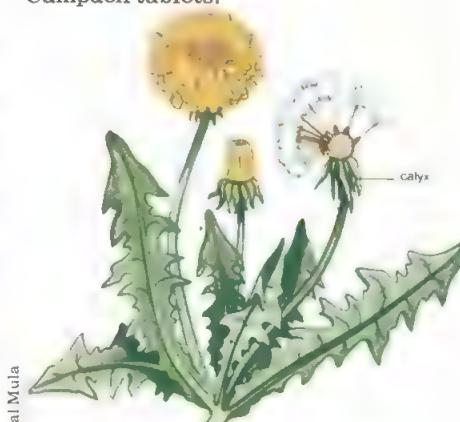
1 teaspoon citric acid.

1 cup tea or $\frac{1}{2}$ teaspoon grape tannin.

0.68kg (1 $\frac{1}{2}$ lb) sugar or honey or a mixture of the two.

Wine yeast and nutrient.

Campden tablets.



1. Discard the calyx and stem of the dandelion as they are too bitter for wine.

- Place everything except the dandelions and the yeast into a bucket. Make an infusion of the dandelion flowers and allow to stand for about half an hour.
- Sieve the infusion into the bucket and stir thoroughly until all is dissolved.

- Allow to cool to 24 °C (75 °F) and add yeast.

Fermentation. The bucket should be placed in a warm room for the first fermentation which should last from 3-6 days. This is the aerobic (in the presence of air) fermentation, nevertheless the bucket must have a lid or be fitted with a clean cloth held in place by a firm band.

As the yeast starts to work considerable bubbling and frothing occurs. The must will change to a milky colour as the yeast grows.

Once the fermentation gets under way the must should be transferred to a fermentation jar. This should be topped up with water and a fermentation lock fixed (fig.2).



2. Fermentation jar, airlock and bung.

Keep an eye on the fermentation lock for the first few days to make sure there is always water present to maintain the trap. Evaporation may necessitate topping up daily. The temperature should be maintained at about 21 °C (70 °F).

Fermentation will gradually decrease and after about four or five weeks the line of bubbles around the top of the container will have died completely away—if not wait another few days to make sure no gas is being given off.

Storage. Dead yeast and perhaps other solid matter (the lees) will by now have settled at the bottom of the fermentation jar. If left there an unpleasant flavour may be imparted to the wine, so they should be removed.

To do this the wine has to be siphoned into a second sterilized container with a siphon tube. Stand the wine container on a table and set the second container on the floor. This process is called racking the wine and must be done several times.

The lower container should be topped up with cooled boiled water if necessary as it is preferable to have the minimum of air space remaining.

Crush one Campden tablet per 4.5 litre (1 gallon) of wine and add before sealing the container with a solid bung or safety lock—these tablets act as a preservative and help to stop further fermentation.

Store in a cool dry place.

Run off the wine into a clean container every eight weeks or so, to remove sediment till the wine becomes clearer.

Bottling. When the wine is clear, then only is it ready to be bottled. For each 4.5 litre (1 gallon) wine you will need six sterilized bottles and corks. Always label your bottles. The wine should then be stored from 3-6 months.

Many flowers can be used instead of dandelions. Broom, clover, coltsfoot, cowslip and roses all make delightful wine.

Some flowers such as the carnation, elecampane, camomile and wallflower have a more pungent taste and should be used sparingly. No more than 0.5 litre (1 pint) flowers should be infused for each 4.5 litre (1 gallon) wine.

Any herb which makes a herb tea or tisane can be used as a basis for wine. Lemon balm, sage, rosemary, raspberry leaves, borage and comfrey are recommended. Young blackberry shoots also make a light wine. There is always lots of room for experimentation.

Mint wine

You will need:

0.5 litre (1 pint) fresh mint leaves.

½ can grape concentrate.

1.2kg (2½lb) sugar or honey or a mixture.

Juice of 1 lemon.

1 cup of strong tea.

Yeast and yeast nutrient.

The method is exactly as that for the dandelion wine.

Parsley wine

When your new parsley bed is well up dig up the plants, cull any faded leaves and wash thoroughly.

Put the leaves into a large pan, pour over boiling water and boil up again for a few minutes. You will need at least 0.5kg (1 lb) parsley to 4.5 litres (1 gallon) wine.

Sieve this infusion over:

—0.75 litre (1½ pints) apple juice.

½ can grape concentrate.

Juice of 1 lemon.

Juice of 1 orange.

1kg (2lb) sugar.

When cool add wine yeast and nutrient and proceed as for dandelion wine.

Enrich and enlarge your wine cellar with a selection of home-made wines.



How to make landscape candles



Landscape candles explore the possibilities of presenting a picture on the outside of a candle. The method involved is an extension of the technique used for making layered candles (see Wax chapter 5, page 172). Successive layers of wax are poured into a mould, but each layer is modified with the aid of a carving tool to form sculptured areas of different coloured wax that gradually build up a picture. This





picture is then illuminated from behind by the lighted wick.

You might begin by working with fewer layers than were used for the landscapes illustrated here. It is possible to tilt the mould slightly for each layer to reduce the necessary amount of carving for a simpler version of the landscape. Try using different shades of blue as a simple basis for a seascape. With practice and greater

proficiency in carving, it is possible to carve vertical lines to create buildings

Materials

Wax. For a long lasting candle, it is worth using high-quality paraffin wax. The minimum melting point of the wax should be 57°C-60°C (135°F-140°F). Wax with a melting point of 60°C-62°C (140°F-145°F) is the best grade wax to use.

The use of the additive stearin is not particularly recommended for these candles since it has a yellowing effect and discolours the wax after a time.

Dyes. Use special wax dyes, available in powder or solid disc form, remembering that the discs allow rather more control when mixing colours. (For detailed information on using wax dyes, see Wax chapter 1, page 52.)

Wax dyes fade, however, and if you wish your candle to last for years, you may prefer to use special pigments for colouring candles which are available from candlemakers' suppliers.

Although not recommended for other types of candle, it is possible to use ordinary poster paint for colouring landscape candles. This is partly because one is only dealing with small areas of colour at a time, and because the poster paint is only used in fairly small quantities. Colours are generally pale in landscape candles: bear in mind that it is a candle and not a painting that you aim to produce and that the light must shine through the picture for the best effect.

If using poster paint, always let the residue of powder settle before pouring the wax into the mould. Use it sparingly to prevent clogging the wick.

Moulds. Landscape candles must be made in rigid moulds. Various shapes of mould are possible but it is probably best to begin with square or round moulds.

Glass moulds have the advantage of enabling the worker to see clearly from the outside the picture that is being created from the inside. However, they also have their disadvantages—releasing the finished candle may prove difficult if stearin has not been used, and these moulds are breakable.

It is therefore advisable to use a rigid plastic mould. Clear plastic containers are available in certain sizes and shapes.

With a little practice in making this sort of candle, it is not as necessary to see the picture from the outside while it is being built up as you might imagine. It is therefore also possible to use metal moulds.

(For information on commercial moulds, see Wax chapter 5, page 1722.)

Luminous miniature landscapes made and designed by Martin Newman.

Wicks. In order that the picture on the candle is not destroyed as the candle burns down, the size of wick must be rather smaller than that normally used. For example, for a candle of 7.5cm (3") in diameter (probably about the minimum size mould suitable for making a landscape candle), a 2.5cm (1") wick should be used. For a 10cm (4") candle, use a 4cm (1.5") wick.

Carving tools. The main problem when carving the setting layers of wax is that one has to get the implement inside the mould. An ordinary kitchen knife may well be too long for this purpose, depending on the size of the mould. A nail punch is about the right size, but it is a little hard. An awl, with its point rounded slightly with a file, is probably the best instrument to use.

With large moulds, it is possible to use an ordinary blunt knife. It is advisable to have a range of knives with a variety of different shapes of blade.

Blowtorch. A blowtorch (preferably with a flame spreader) is necessary for the finishing processes.

Preparing the mould

Make a hole in the centre of the base of the mould. If using a metal mould, this will have to be drilled.

If you are using a rigid plastic mould, make a hole by heating the end of a wicking needle and gently pushing it through the plastic from the outside. (It is important to heat the wicking needle so as not to shatter the plastic.) The hole in the mould should be just large enough to allow a wicking needle to pass through.

Select the wick required, and cut a length about 10cm (4") longer than the height of the mould.

The wick should be inserted into the mould and secured on the underside with a double or triple knot to prevent it from pulling through the hole.

Pull the wick taut and cover the knot completely with mould seal to seal the wick. (Note that the underside will eventually be the bottom of the candle and not the top as is usually the case. The candle is made right way up to facilitate building up the picture.)

Building the landscape

Melt a small quantity of white wax and add colour for the first layer. Landscape candles usually have their lowest layers in brown or dark green to suggest earth or grass.

Prop up the mould in a slightly tilted position—this will produce a curved outline and will reduce the amount of carving necessary.

Pour a small quantity of the coloured wax at a temperature of 76°C-79°C (170°F-175°F) into the mould,

filling it to about a seventh of its capacity.

Let this layer of wax harden while preparing the next colour. Plan your colour scheme below the horizon to include different shades of green, brown and yellow to depict fields, hills and so on. For the second layer, use rather less dye to obtain a contrast in tone as well as in colour.

When the wax has set in the mould, it is ready for carving. Modify the top outline of the layer of wax by drawing the carving tool along the top edge of the wax layer round the inside of the mould to produce the required shape. (If, when you begin to carve, liquid wax spurts out, the wax is not yet ready. On the other hand, the layer must not be allowed to set too hard for it will then be difficult to carve and may not adhere to the next layer.)

□ Remove the loose chippings of wax from the mould. Ensure that the inside of the mould is clean from surplus wax. Stand the mould upright and pour on the second layer of wax.

□ Repeat the process layer by layer, making sure that each layer is sticking to the next. If a layer seems to have set too hard, hold the mould upside down over a flame until it softens again. Every few layers, check that the wick is central by pulling it upright. Always leave the wick hanging out of the mould and do not let it set into a layer of wax or touch the side of the mould.

□ For layers representing lakes, rivers, sea or sky, use very little dye—a speck of powder or a single shaving from a dye disc.

Bear in mind the simple rule of perspective: the horizon line is always level with the eye level of the observer. Lines above eye level come down to meet the horizon, while lines below eye level go up to meet the horizon.

To suggest distance in the landscape, use paler colours.

□ Particular care should be taken when pouring the final sky layer. It is advisable to avoid trapping air bubbles at this stage. The mould may be tapped to get rid of these, but the problem should not arise if you work with a fairly cool pouring temperature of 76°C (170°F) and if you leave the candle to cool at room temperature.

□ While the top layer is still liquid, push a wicking needle through the middle of the candle in about a dozen different places. Stay well clear of the sides of the candle. This process should help to bind the layers together and should be done without force. If the needle hits against a hard layer at the bottom, do not force it through.

□ Finally, pull the wick taut and secure it to a pencil or stick lying across the top of the mould. Make sure that the wick comes out of the very



Paul Kemp

centre of the candle.

□ Leave the candle in the mould to set overnight.

□ Remove the candle from the mould the next day. First slide a knife across the base of the mould, removing the mould seal which secures the wick, and cutting through the wick just above the knot. If a plastic mould was used, the candle should drop out when the top of the mould is squeezed. If a metal mould was used, turn the top of it in a flame a few times, and the candle should slip out.

□ The candle should now be topped up. The wick should first be trimmed to about 1.5cm (½") above the sides of the candle.

□ Direct the flame of the blowtorch at the top of the candle, protecting the wick with the blade of a knife. The whole surface of the candle must glisten with melted wax as you pour on more wax of the same colour as the top layer.

□ Try not to overflow the well of the candle, as hot wax running down the sides will very quickly melt them. Excess wax from the top of the candle should be checked by continually passing a finger round the circumference.

□ When the newly added wax has set hard, flatten the top of the sides of the candle with the blade of a knife and repeat the topping up process. It will be necessary to top up at least three or four times if you want a completely flat top to the candle.

□ Let the top of the candle dry completely before embarking on the finishing processes.

Carving the second layer of wax with a nail punch in a clear plastic mould.

Greenery

Pressed leaves can be added to the landscape candle to give the appearance of trees. Use thin leaves such as yarrow leaves or carrot tops, which, with careful cutting, will resemble the outline of mature trees.

□ To apply a pressed leaf, remove any excess drips of dried wax from the sides of the candle with a knife.

□ Lay the candle on its side at an angle of about 30 degrees in a tray for catching wax. Rest the leaf in its required position in the landscape.

□ Holding the blowtorch in one hand and a block of white wax in the other just above the leaf, melt the wax so that it runs on to the leaf and the candle at the same time.

□ Make sure that the leaf is completely covered in wax. Press it in place if necessary.

□ Remove any excess wax by carefully scraping round the leaf with a knife.

Finishing off

□ Hold the candle by its wick and rotate it while applying a fairly strong flame from the blowtorch. If necessary, scrape away patches of excess wax with a knife and direct the flame at these areas to remove any imperfections.

□ For a final glaze, dip the whole candle up to the top of its sides (do not let wax go over the top of the candle) in white wax at 104°C (220°F).

□ Scrape the base of the candle with a knife so that it stands upright.

Pencils, chalks and crayons



A great variety of pencils, crayons and chalks is available and a basic knowledge of their respective uses and capacities is of obvious value to the artist or craftsman. All of these materials have the advantage of being easily transportable. They do not involve any mixing or setting out of equipment and a finished sketch can be put away without having to wait for paint or ink to dry. This is particularly convenient when working out of doors. Using dry media enables you to use a wider range of papers since some types are not suitable for paint. It also enables you to achieve a number of effects, such as subtle gradations of tone or colour, that are not as easy with paint.

Pencils

Lead pencils are made of graphite (black lead) which is a form of carbon. They come in varying degrees of hard and soft from 7H (very hard) to 7B (very soft). Hard pencils keep their point and produce a fine, pale grey line. They are suitable for accurate drawing, such as making scale drawings or plans. The softer varieties produce a darker, softer line and are more suitable for artistic freehand drawings. For a fairly detailed drawing an HB to 2B should be used, for loose sketches, a 3B to 7B can be used.

Soft lead pencil drawings smudge very easily. When finished any smudges should be cleaned off with an eraser and then the drawing should be sprayed with fixative. Fixative comes in aerosol cans and bottles and is sprayed over the finished drawing.

Carpenter's pencils, sometimes called lay-out pencils, are rectangular in cross-section and are available in lead and the primary colours.

Charcoal pencils. These are similar to lead pencils but have a charcoal core. They are suitable for making quick sketches. Charcoal is normally too soft to do detailed drawings although it is possible to buy harder and softer charcoal pencils.

Charcoal can also be bought in sticks. This allows greater scope to use the charcoal in different ways for special

effects. It is often used in conjunction with white black-board chalk in sketches and drawings.

Charcoal smudges very easily and a finished charcoal drawing should be cleaned up with an eraser and then sprayed with fixative. The smudging qualities can of course be used deliberately to create a special effect in a drawing.

Colour pencils. A number of different types of colour pencils are available from art shops. Some are very smooth and give a finish with a slight sheen, others are very chalky and dry and must be fixed to prevent smudging. A third type, such as Caran D'Ache Prismalo, is water soluble, so that after colouring with the pencils, a wet paint-brush rubbed over each colour will turn the colour pencil into water-colour.

Chinagraph pencils are very waxy and are used for writing on smooth shiny surfaces such as glass or plastic that

will not 'take' ordinary pencil. These are not permanent and can be rubbed off easily, although a coat of varnish would stop this happening.

Chalks and pastels

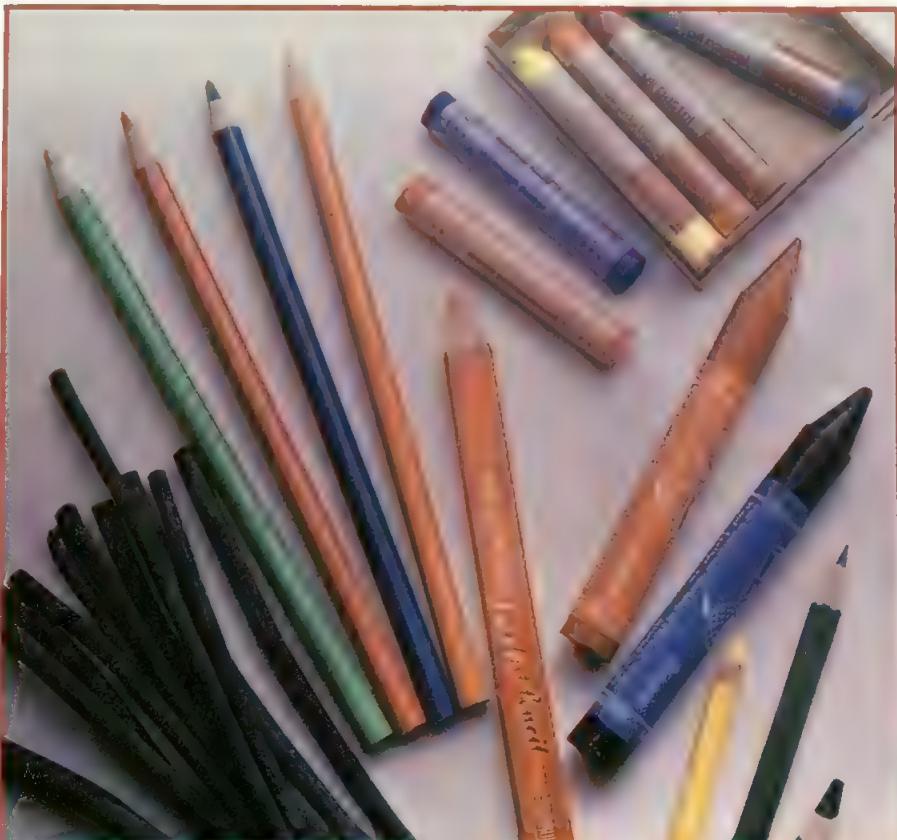
Chalks and pastels are another dry medium and come in many different types.

Oil pastels are oil based and very smooth and creamy. They are particularly useful for quick colour sketches as preparation for a painting, but can also be used for finished drawings.

Fabric crayons. These are specially designed for use on fabrics, but a design can first of all be drawn on to paper and then transferred on to fabric. To do this place the drawing face down on to fabric and run a warm iron over the top to transfer the colour on to the fabric. These crayons work best on synthetic fabrics such as Crimplene, Trevira, nylon and Terylene, and are not suitable for use on natural fabrics such as cotton or linen.

Wax crayons are similar to oil pastels but are harder and do not give such rich colour. They are cheaper than oil pastels and suitable for children to use.

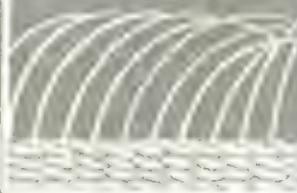
Artist's pastels are available in a vast range of colours and are the highest quality pastel. They are very soft and crumbly and are used for finished colour work. They smudge very easily, allowing the colours to be blended into each other. Drawings should be sprayed with fixative when finished.



A selection of the many pencils, chalks and crayons available to the artists.

Designing with raffia

Basketry 28



The previous raffia chapter (Basketry chapter 27, page 2674) describes how to start a coil and how to work the various stitches. This chapter explains how to shape the coil and work out patterns.

Shaping the work

On a flat mat each round of work is built up on the outer edge of the coil. To change direction for the upsett,



that is the change from the base going out (for flat work) to the sides going up (for bowls and baskets). The core should be stitched on to the top of the coil. Each round after that is then stitched on top again to give the required shape.

If the same pressure is put on the core all the way round, the basket will keep a good even shape all the way up. But this is not always wanted. For instance

the sides may slope out more than the back and front or one side may protrude to form a 'spout'.

To alter the shape, change pressure on the coil to position it. Continue stitching and place the core to give the required shape. Each round must be done identically or the effect will be haphazard.

When the basket is as high as required the coil can be taken across the basket

to form a handle. Build up the handle by going round half the rim of the basket and again over the handle. Then join in and repeat on the other side to balance the whole thing.

Coiled work is not limited to flat objects. A variety of shapes can be designed as these baskets, made by the Paiute Indians, illustrate. Courtesy of Heard Museum, Phoenix, Arizona.



Patterns

Colour can be added to any coiled work in various ways. Bands of different colours can be incorporated into the work. Join in a colour about 18mm (4") before you need it so that it is firmly anchored when required.

You will find it quicker to have each colour threaded on to a separate needle so that you can pick it up as required. Carry any colours that are not being used underneath the wrapping and along the core. When working a coloured pattern, bear in mind that in a figure of eight stitch the pattern is made by the lower half of the stitch only—the top half will be covered on the next round.

More complicated patterns require careful planning. Start with flat work before trying patterns on a basket.

On a sheet of plain paper draw a series of concentric circles 6mm (4") apart. Divide the circle into the same number of sections that you want for the pattern repeat. Fill in the pattern in the colours you intend using.

Although the pattern gives separate circles, the coil is continuous so that at the end of each round there will be a jump up to the next in the pattern. Try to plan the work so that this happens between colours and motifs

rather than in the middle of them.

If you are making a bowl or raised platter allow for the pattern to get smaller as the work curves up towards the edge. The pattern gets smaller because the circumference of the coil increases less than that of the flat pattern as the coil is built upwards and not outwards. Do not stick to a set number of stitches for the pattern as the thickness of the raffia varies—go by the distance of the core to be covered even if it takes six stitches, say, on one pattern and eight on the next.

To make patterns for the sides of a basket, providing that they are reasonably straight, draw and paint the patterns on a series of horizontal lines (which represent the sides of the basket), allowing enough distance to go all the way round the basket at its widest point. If the pattern is to be repeated just draw it once then calculate exactly where to start each repeat by dividing the circumference by the number of repeats. Measure the coil as you work and check that it agrees with the planned pattern.

Below: figure eight stitch was used to make this colourful fruit bowl. Designed by Barbara Maynard.

General Hints

If you are using synthetic raffia, do not cut off too long a length as it tends to get frayed and very thin before you reach the end.

If you are using natural raffia, and if the work does not have to be too fine, use at least two pieces together. This is because natural raffia varies in width and thickness from end to end, and by putting two pieces together it is easier to control and keep a uniform thickness.

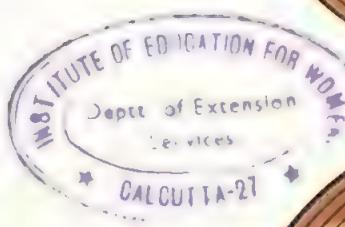
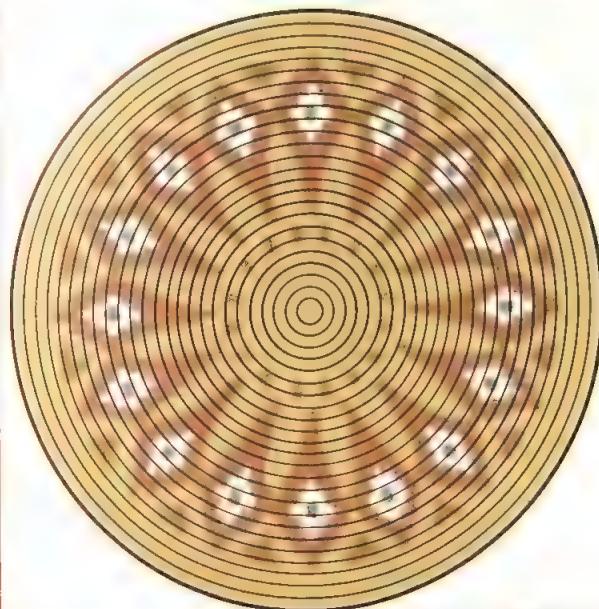
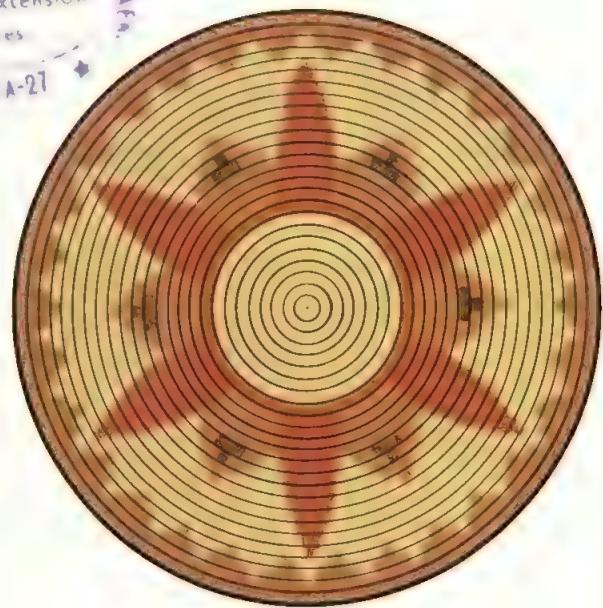
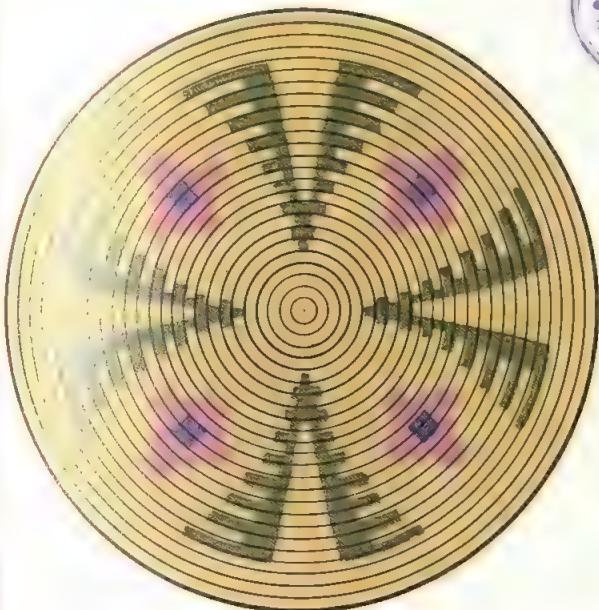
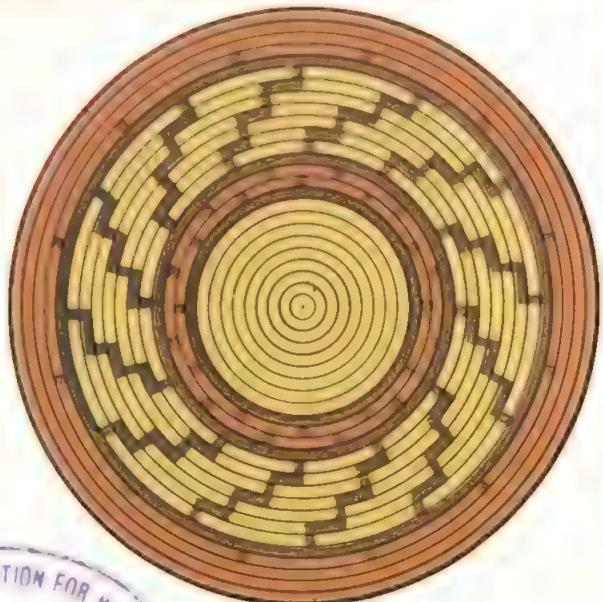
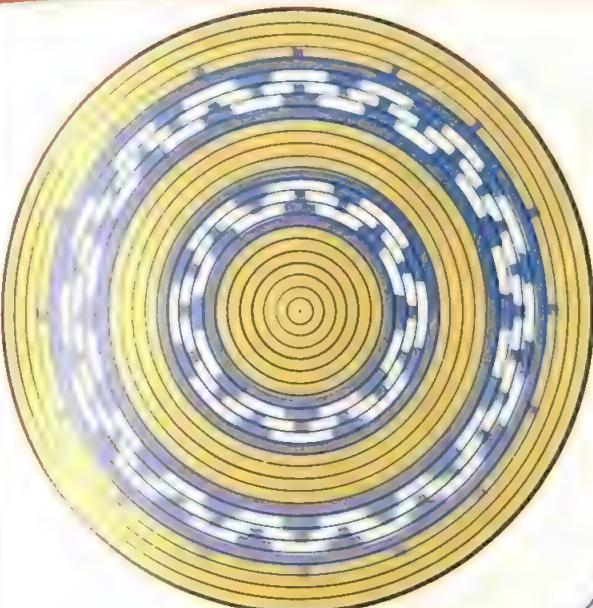
Synthetic raffia may be used double or even treble for quicker working. The first 12cm (5") of a coil takes about 1.8m (6') of 6mm (4") core.

If you find it difficult to join the core, pin or stitch the new end in position to hold it while being stitched.

If you are shaping your work, it is a good idea to draw the required shape on a piece of paper and compare it with the work as it progresses. This allows you to correct the work without distorting the shape.

Right: sample patterns for coiled work. Enlarge and adapt patterns to the particular shape you are making.





Weaving with rags

Yarn —
weaving 34



Rag weaves are those in which strips of cloth are used instead of west yarn. We tend to think of the recycling of materials as a relatively recent phenomenon but the use of worn out clothing and furnishings to make rugs and coverlets has a relatively long history. Some beautiful examples of

Detail of a pile rug made by knotting rags. Designed by John Hinchcliffe



Scandinavian, English and colonial American rag weaving can be seen in museums. The custom of weaving with rags grew out of the necessity to be sparing with materials of all kinds. Nothing was wasted and few dreamed of the modern habit of 'wearing out and throwing away'.

Apart from its connections with thrifty housekeeping, weaving with rags offers many advantages. Not only are rags inexpensive and readily available but they offer a great deal of colour, textural and design possibilities.

Materials and equipment

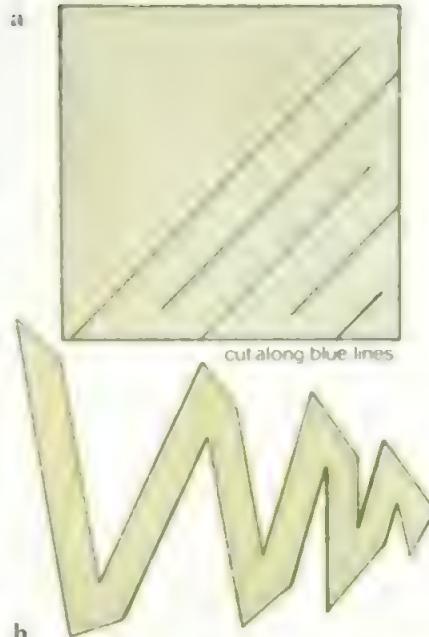
Synthetic and natural cloths, woven or knitted cloths, printed or plain cloths all can be used in rag weaving. You can, for instance, cut up and weave your old skirt, blouse, tights, table-cloth, curtains—any fabric, in fact, that is large enough to cut into strips of reasonable length. It is this variety of colour, weight and pattern which is so interesting to explore.

Looms. Initially, any type of loom or tapestry frame is suitable for the weaving of rag strips.

Rags take a lot of beating down and it is essential that the loom has a heavy batten if the weaving is to consist wholly of rags and the warp is to be totally hidden. For making large, closely packed rag rugs a foot loom is ideal as the batten is attached to the base or 'underslung'. For smaller rugs a vertical rug loom (see Weaving chapter 33, page 2684) can be used. If you wish to combine rag weaving with ordinary yarn weaving then a table loom could be used. However, too many rags will mean that the cloth beam will not be able to handle the resulting fabric.

Warp coverage. It is probably a matter of opinion and best left to the individual weaver to decide for himself how much coverage of the warp is wanted. Most Scandinavian rag rugs have a lot of warp showing without any detriment to the strength of the rug or its design. If total warp coverage is not a priority, dyeing the warp, either in a single colour or in a multi-coloured way, can help in overcoming the specks of white warp that would show between the rag colour.

Warp. As with all weft faced rugs, the warp should be strong. Linen yarn which has less tendency to stretch is ideal in this case, but cotton or a strong yarn is sufficient. Generally, a warp sett of 4 ends per 2.5cm (1") is used. This is obviously affected by the weight of fabric being used and the size of the cut strips. A sett of 4 ends per 2.5cm (1") is suitable for medium weight cotton cut in 1.25cm (½") strips. Obviously, a great deal of experimentation is possible.



1a, b. Cut fabric on cross to form a continuous strip that does not fray.

Preparing the rags

Whatever the size of the piece of work you intend to weave, be prepared for a considerable amount of waste in making your collection of suitable cloth bearing in mind that weaving consumes a great deal. A flat 1.25cm (½") piece of cloth squashes down to at least one third of its original size when woven. Because of this a rag rug needs about twice the weight of rags than would be needed in yarn. A small rug of about 91cm x 152cm (36" x 60") would need between 5.5kg (12lb) and 7.25kg (16lb) dry weight of rags depending on the rag fabric.

Be sure to sort out your cloth into types and colours—all wool and all cotton should be kept separately unless you wish to sort the fabric into colour categories. Make sure that any rotten cloth is discarded before starting to weave.

Printed cloth or any cloth with a pattern on it is interesting to use. Plain cloth, especially if coloured is good for areas of contrast. Sometimes it is useful to dye the cloth before weaving. This, of course, is especially true of white material but printed fabric can be improved a great deal if a particular colour theme is wanted for the whole piece.

When preparing the cloth for weaving, it is best to cut (not tear) the fabric on the cross. Cutting on the cross ensures that the woven surface is not covered with frayed ends. Cut into a continuous strip (figs.1a and 1b) making the strips as long as possible. One continuous strip makes for faster more efficient weaving and helps when winding the weft on to a shuttle.

Weaving rugs

Rags can be used in such a way as to produce a pile or simply woven flat. While many of the most successful rag rugs are the simplest, with plain strips woven in plain weave, techniques such as *soumak* (Weaving chapter 33, page 2684) and *Ghiordes* knots (Weaving chapter 11, page 856) can be adapted to rag weaving. Plain and textured areas can be used together in the same rug. Rags can be woven in combination with yarn or experiments can be tried out such as twisting wefts of different coloured strips together. In fact, it is up to you to use the freedom that rag weaving allows.

The swinging cradle

The frame of the cradle overleaf is also the loom for the weaving. A large frame is also needed as a temporary support while weaving.

You will need:

Quantity of coloured rags to make the strips.

Two strong, but slightly curved, sticks about 1 metre (3' 3") long for the cradle sides.

Five withies (thin, supple sticks) about 76cm (30") long for the hood and end pieces. These sticks can be of any wood provided that they are supple enough to bend in an arch for the hood. Suggested wood: willow, alder or hazel.

Drill and 1cm (½") bit.

Ball of strong string or cotton twine for warp.

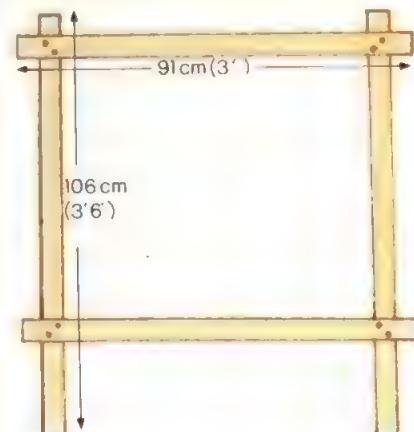
Glue for securing sticks in holes.

Support frame 91cm x 106cm (3' x 3'6"). A frame can be made for this project simply by nailing together four pieces of wood as shown in fig.2. Two of the pieces must be about 91cm (3') and the other two 106cm (3'6").

Four nails.

Six very short sticks 1cm (½") diameter. Penknife.

Preparing the frame. Before weaving can start, the side sticks have to be secured to the support frame.

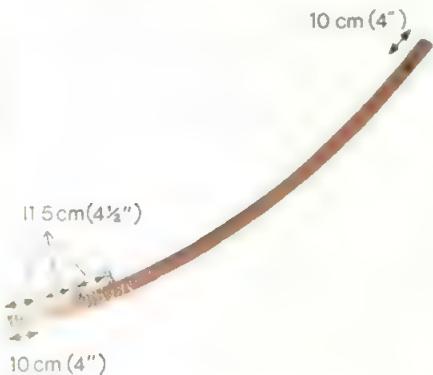


2. A very simple frame is needed to act as a support for the weaving.



□ Take the two side sticks and drill a hole 1cm ($\frac{1}{2}$ ") wide, 10cm (4") from each end of the sticks and in relation to the curve as in fig.3.

With these holes to the side of the stick, drill three more holes in the top of each stick (see fig.3). These holes

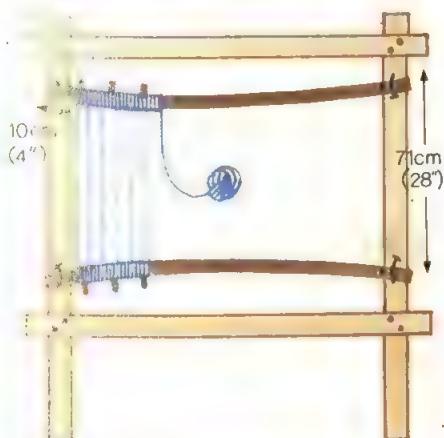


3. Drill the holes in the side sticks.

should also be 1cm ($\frac{1}{2}$ ") wide and should be at 11.5cm (4 1/4") intervals in order to hold the hood withies.

□ Using the short sticks, plug these holes temporarily to keep them clear while the warp is put on.

□ Take the two side sticks and use four bent nails to attach them to the frame 71cm (28") apart (fig.4). The



4. Wind warp between the two sticks.

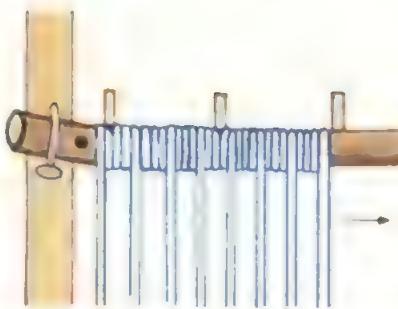
curve of the sticks should bend inward. You are now ready to start weaving.

Weaving the base. The warp is simply wound around the two side sticks and the base of the cradle is woven directly on to them.

□ Start winding on the warp about 10cm (4") from the end of the side sticks (see fig.4).

In order to space the warp on the curving sticks, make three turns around the stick between each warp end (fig.5).

Slender saplings and softly shaded woven rags are combined in this beautiful swinging cradle designed by Bill Barlow.



5. Make three turns between each warp.

□ Wind the warp between the two sticks until you are 10cm (4") from the other end. Try to keep an even tension on the warp as you wind.

□ Prepare your rag strips 2.5cm (1") wide and long enough to go from one side of the warp to the other to prevent bumpy joins from occurring in the middle of your weaving.

□ Start weaving from the bottom of the warp by threading a rag strip under and over the strings of the warp. When weaving, beat down each strip firmly. A fork can be used for this.

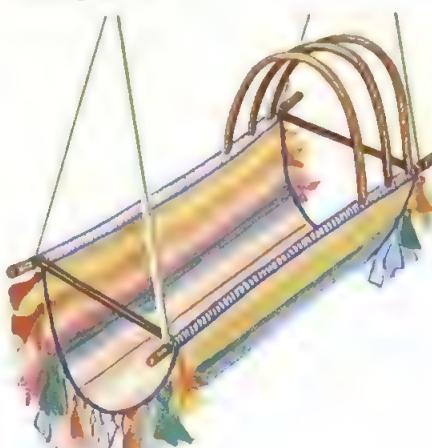
Waisting. There is always a tendency when weaving in this way for the fabric to waist, or go in, towards the centre. Normally the reed would prevent this on a proper loom. Do not worry if your weaving begins to waist for in this case it is an advantage as it has the effect of sloping the cradle ends inwards.

Finishing. To finish off the ends at the side of the weaving either tie alternate strips together in a reef knot and trim or, alternatively, cut the ends and sew them back into the fabric.

□ When the weaving is complete, remove the sticks from the frame and attach a strong cord to each end of the two sticks. Tie the cords together and hang the cradle base up.

Weaving the hood and ends is done in exactly the same way with the frame of the cradle acting as a loom.

□ Cut two of the withies to a length of about 45cm (18") and taper the ends with a penknife.



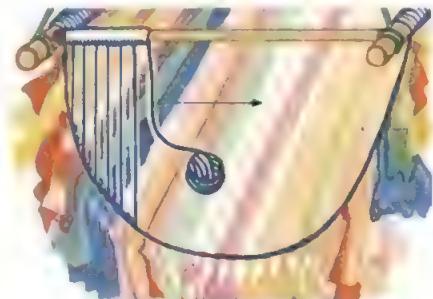
6. Position withies for hood and ends.

□ Stick the two withies into the horizontal holes with the aid of the glue (fig.6). To further secure the frame tie across in the same place with a piece of string.

□ The remaining three withies for the hood should also be cut, tapered and stuck into their holes (see fig.6). Their lengths should be such that they form a pleasant arch for the hood.

The cradle is now ready for warping up the ends and hood.

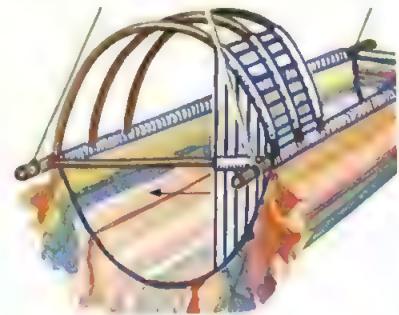
□ The warp is spaced in the same way as before. At the foot of the cradle, the warp is simply wound around the horizontal stick and then down behind the last end of the base fabric (fig.7).



7. Warp between stick and last end.

□ Make sure that the warp is loose enough to maintain the curve of the cradle base. Laying a pillow in the cradle helps to keep this curve both when warping and when weaving.

□ The hood and front end are warped up together. The warp goes through the fabric of the base, up around the horizontal stick and then up around each of the sticks of the hood (fig.8).



8. Warping the front end and hood.

The number of turns around each stick will need to be increased at the sides of the hood in order to keep the spacing even.

□ The weaving of the rag strips is done in exactly the same way although care must be taken not to distort the shape of the cradle.

□ If the ends are finished by knotting it leaves a pleasant fringe at each end and along the sides of the hood.

□ Make sure that the cords holding the cradle up are strong and securely fixed before trying it out.

Inlaid metal jewelry

Metal 32

The craft of decorating wood with metal inlay has been performed by craftsmen since metal came into general use. Fine examples of such work can be seen in Bosnia, now part of Yugoslavia.

Most of the objects decorated by the Bosnian jewellers form part of their traditional costume. The fine lines and intricate patterns of the inlay are unique and traditional techniques and designs are still used today.

Combining wood and metal in a design will diversify and extend the scope of jewelry making. If you are only used to working in metal, you may at first find it difficult to work with wood (and the reverse). Practise on some cheap softwood offcuts, using wires of various thicknesses to get the feel of the technique, materials and tools.

Materials

The choice of woods and metals depends largely on personal taste and on the object being made. Bear in mind that a metal such as silver will hardly show against a pale wood. Generally, a dark wood such as ebony, rosewood, utile (also called sipo), teak or dark red meranti should be used. These are all hardwoods which will finish beautifully but some may prove difficult to obtain.

More common pale woods can be used and then darkened with suitable wood stain. Unusual effects can be obtained with coloured wood stains. Apply the stains before inlaying the metal.

Brass, copper and silver can all be used and are available in a variety of thicknesses. Do not feel confined to inlaying wire. Squares, circles, stars

and other shapes can be cut from sheet metal (see Metal chapter 12, page 836) and inlaid into the wood as well. Silver tubing and square silver wire make interesting variations.

Technique

The traditional Bosnian jewellers' technique entails first carving the wooden object, either a pendant, buckle, brooch, chain or buttons. The patterns of Bosnian inlay take the form of volutes, intricate spirals and swirls. These patterns are cut into the wood with a gouge. The gouge has a V-shaped blade, similar to the kind used by wood engravers and known as a parting tool.

A small hole is drilled at each end of the pattern. One end of the wire to be inlaid is bent with a pair of pliers to form a small right angle. This is inserted into the hole and tapped firmly into place with a hammer. The rest of the wire is then pressed into the groove, being fixed with adhesive. When the end of the pattern is reached, another right angle is made in the wire and inserted into a hole at the end of the pattern. A small drop of glue is sometimes used to secure it. The finished piece is then smoothed with a fine metal file or fine emery paper or both until the metal and wood are flush.

The process is very laborious and exacting, especially for the amateur. Swirling patterns are difficult to cut neatly. The gouges must be kept sharp, particularly when working with hardwoods such as ebony or teak. The Bosnian jeweller would have a wide selection of parting tools to suit the various sizes of wire to be inlaid.

Unless you have a lot of wood engraver's tools and are able to keep them sharp the craft could be difficult. However, there are alternatives. Avoid delicate swirls and concentrate on simple geometric and straight line patterns. The grooves for these are easier to cut and in most cases a coping saw or fret saw can be used.

Also, with the quick drying adhesives available today, the holes drilled at the beginning and end of the patterns can be eliminated; the metal being glued into place and compressed in a vice or press until set.

Necklace

The necklace shown here is a good introduction to the craft. The wooden design is cut from teak and the inlay is silver. The holes in the top to take the thread are drilled with a 1mm ($\frac{1}{16}$) bit. The basic design of the necklace can be adapted—eg fewer of the wooden pendants can be used. Here, the necklace is strung on leather and string but a silver chain would be suitable.



The tools required for decorating wood with a metal inlay include a coping saw and various files.



By Anne

You will need:

A piece of wood from which to cut the parts of the necklace. The wood should not be thicker than 12mm (½") or it will be too heavy.

Silver, copper or brass wire—length according to pattern.

Contact adhesive.

Wooden tool like those used for modelling clay or one similar to that used in pewter work (see Metal chapter 14, page 1057). This is used for pressing the wire into the grooves.

Round-nosed pliers, wire cutters and needle files.

Medium and fine grade emery paper—an abrasive paper used for metal work. Medium and fine grade glasspaper.

Coping saw or fret saw. These are used for cutting curved shapes and are fitted with replaceable blades. When buying a coping saw, specify that you want it for cutting wood. The coping saw is used similarly to a jeweller's piercing saw (see Metal chapter 12, page 836).

Vice or press. Two pieces of wood and a large G-clamp will do.

Drill and a selection of fine bits.

Wood carver's tools with V-shaped blades of various sizes—optional.

Trimming knife.

Wood files to shape the wood.

Pencil, graph paper, tracing and carbon paper.

Linseed oil or clear polyurethane varnish.

Acetone, nail varnish remover or carbon tetrachloride—optional.

Decide on a design and pattern to be inlaid and draw them to scale on the graph paper. Lay out the whole necklace on the graph paper to get an idea of the proportions.

Cut the wood to the required size, using the coping or fret saw.

With the medium and then fine grade glasspaper, smooth the pieces of wood on all sides. Shaping can be done with wood files.

Transfer the design to the wood using the carbon paper and pencil.

The grooves can be either cut with a parting tool or, if they are straight lines, with the coping or fret saw. Use a blade that is as thick as the wire being inlaid. Fret saw blades come in various thicknesses. The grooves should be just deep enough to let the wire lie flush with the wood surface.

Cut a length of wire long enough to fit into the design.

With the round-nosed pliers, bend the wire into the required shape (see Metal chapter 1, page 24). This step is unnecessary for the necklace made here as a straight line pattern is used.

Apply the adhesive according to the manufacturer's instructions, and press the wire into the groove using the modelling tool.

Clamp the piece in a vice or press and leave until the glue sets.

Drill holes for assembling pieces.

This necklace is made from pieces of teak inlaid with silver wire.

Finish

Ideally, the inlaid wire and wood should be flush. If this is the case, use the fine grade emery paper to rub down the surface lightly. Always work with the grain of the wood.

If the metal is higher than the wood, you can leave it like that, cleaning off the glue with acetone, nail varnish remover or carbon tetrachloride (all available at chemists). Use these carefully so as to not mark the wood or affect the bond between the wood and metal. Alternatively, sand the metal flush with the wood surface using medium grade emery paper.

Finish with a fine grade glasspaper to smooth the wood.

The finished item is either covered with linseed oil or a clear polyurethane varnish. If linseed oil is used (which darkens the wood slightly) the metal must first be coated with a metal varnish. This prevents the wire tarnishing. Soak the wood in the oil and then rub with a soft cloth.

The polyurethane varnish can be applied either with a cloth or brush. When all the pieces have been finished, they can be joined with lengths of string or fine leather. The necklace can then be strung either on leather or a chain.

Poncho for all seasons





Opposite: keep dry in the wettest of weathers in this gay showerproof poncho. This page: lengthen the pattern to make a full-length winter cape in a warm woollen tweed.

Here is a simple and adaptable pattern for a poncho that is both stylish and practical. The same pattern can be made up into two quite different garments depending on your choice of fabric and length (see previous page). Make up the shorter version with large patch pockets in a light-weight shower-proof nylon fabric to keep you dry in April showers. The style is so loose-fitting, however, that this cape can also be worn over thick jumpers in mid-winter. It looks smart over skirts and trousers alike. Light and versatile it is a useful garment to take on holiday, at any time of the year.

Alternatively, lengthen the pattern and make it up in a warm woollen material such as a rustic-looking Scottish tweed for a full-length winter cape. It is best to choose a fabric that is not too stiff or the cape will not hang in soft folds.

The poncho has a self-lined hood for wet or windy weather. The armholes and neck opening are fastened with large sturdy press studs. An unusual feature is that the cape does not have a front opening but is put on over the head, thus giving the elements no chance to penetrate.

The pattern

Graph patterns for the cape are given overleaf for a small and large size. The finished length of the garment is 108cm (42 $\frac{1}{2}$) from top centre back to hem for the shorter version. The pattern can easily be lengthened for the full-length version. Lines for such alteration are indicated on the graph pattern.

A seam allowance of 1.5cm ($\frac{5}{8}$) is included on the pattern. A hem allowance of 1.5cm ($\frac{5}{8}$) has also been added.

You will need:

Graph paper and pencil.

Large sheets of paper (optional).

Make paper patterns for all the pattern pieces using the graph pattern given.

If you wish to lengthen the pattern, lay out the pieces for front and back sections and cut along the lengthening lines indicated on the graph pattern. Cut along these lines and open out the pattern by the extra length required. Stick new pieces of paper at the back of the pattern. Connect up the cutting lines and cut the new pieces of paper along these cutting lines.

The cape

You will need:

For the shorter version: 3.45m (3 $\frac{1}{2}$ yd) of 140cm (54") wide fabric for the small size or 3.55m (3 $\frac{3}{4}$ yd) of 140cm (54") wide fabric for the large size.

To calculate fabric requirements for the full-length version, measure the extra length required, double this

measurement, and add the total to the relevant fabric length given above.

If making the longer version in fabric with nap, be sure that the fabric is not less than 140cm (54") wide as the pattern pieces only just fit into the width of the fabric. Otherwise you may have to cut away the sides of the front and back pattern pieces slightly at their widest points.

For fabric requirements if using fabric of a different width, work out your own cutting layout (see Sewing chapter 8, page 684).

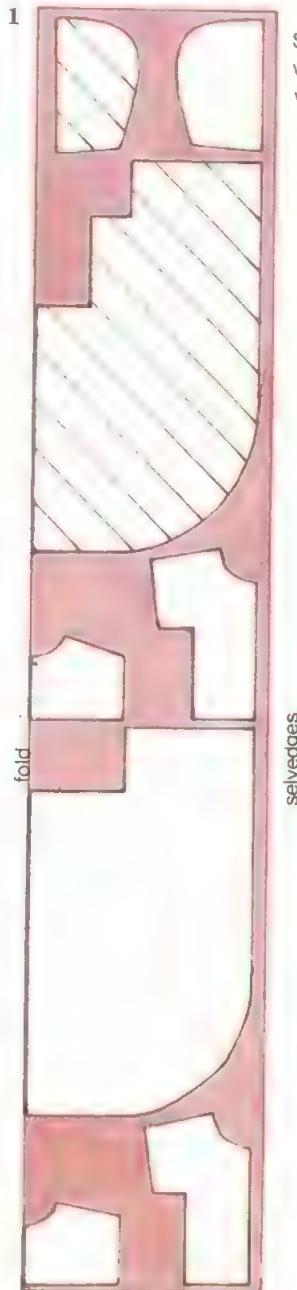
Matching thread.

Contrasting tacking thread.

6 large press stud fasteners, available in kit form with full instructions from haberdashers.

Lay out all the pattern pieces on the fabric as shown in the relevant

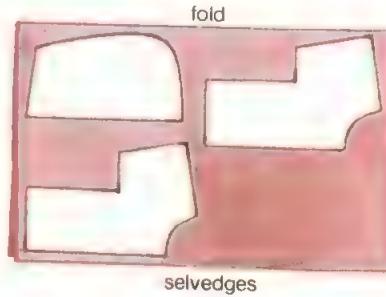
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Suggested cutting layout for full-length cape without pockets for 140cm (54") wide fabric with or without nap



Suggested cutting layout for short cape for 140cm (54") fabric without nap



KEY



right side of pattern face down

suggested cutting layout (fig.1) or following your own cutting layout, and cut out.

Mark all the circles shown on the graph pattern with tailor's tacks.

The hood

With right sides facing and matching notches, tack and machine stitch the centre back seam of the hood.

Press the seam to one side.

Note: when pressing shower-proof nylon fabric, use a pressing cloth and a warm iron.

On the right side of the hood, top-stitch 6mm ($\frac{1}{4}$) in from the back seam line through the seam allowance.

Repeat for hood lining.

With right sides facing and matching front edges, tack and stitch the hood lining to hood round front edge.

Turn hood right side out and press.

Topstitch round the front edge, 6mm (1") from the edge.

Front and back yokes

With right sides facing and matching notches, tack and stitch the shoulder seams of the front and back yokes.

Press the seam allowance towards the back yoke.

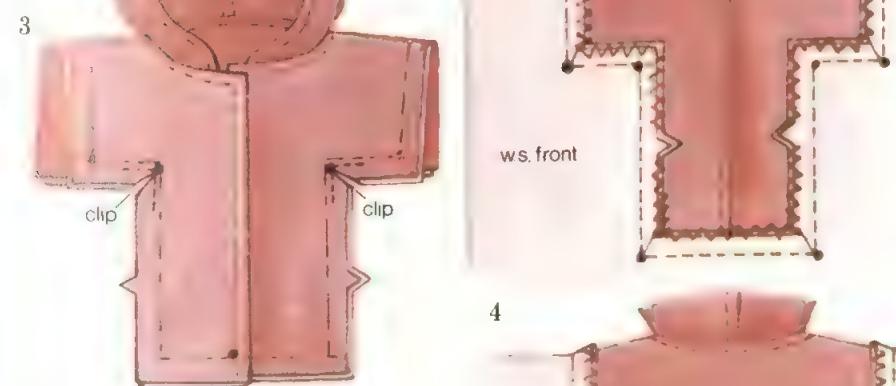
Repeat with yoke facings, again press the seam allowance towards the back.

On the right side of the back yoke, topstitch 6mm (1") from the seam line.

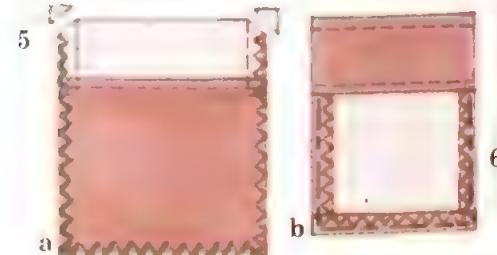
Repeat for back yoke facing.

With right sides facing, matching notches, and matching tailor's tacks on hood to shoulder seams, tailor's tacks at centre fronts, and centre backs, tack the hood to the neck edge of the yoke.

2. Stitch yoke facing to yoke over hood.



3. Tack edges; stitch and clip corners.



5. How to assemble a pocket.

With right sides facing, matching centre fronts, centre backs and shoulder seams, tack the yoke facing to the neck edge over the hood (fig.2).

Stitch round the entire neck edge and front edges as shown in fig.2.

Trim the seam, clip the neck curve and cut across the corners (see fig.2).

Turn the yoke facing to the inside and press flat.

On the right side, topstitch along the front edges and neck edge, 6mm (1") from the edge and the neck seam line.

Following fig.3 and matching centre fronts, lap the right front over the left front and tack across the lower edge of the yoke.

Matching the outer edges of the yoke facing, tack round the outer edges (see fig.3).

Machine stitch the inner corners of the front yoke to prevent the fabric from fraying and clip to tailor's tacks as shown in fig.3.

Main cape sections

Machine stitch the inner corners of the front and back cape and clip to tailor's tacks (see graph) as for front yoke.

With right sides facing and matching notches, tack and stitch the shoulder seams of the front and back cape.

Neaten the raw edges as one with a machined zigzag stitch or by overcasting by hand.

Press the seam allowance towards the back. On the right side of the back cape, topstitch 6mm (1") from the seam line.

Attaching yokes to cape

With right sides facing and matching notches, centre fronts, centre backs, shoulder seams and tailor's tacks, tack and stitch the front and back yokes to the front and back cape sections (fig.4).

Press the seam towards the yokes.

Neaten the seam allowances as one with a machined zigzag stitch or by overcasting by hand.

On the right side, topstitch round the entire front and back yokes 6mm (1") from the seam line.

Pockets

Following fig.5a neaten the top edge of each pocket facing by turning under 6mm (1") and machine stitching.

With right sides facing, fold each pocket along the fold line and stitch down at the ends. Cut across these corners (see fig.5a).

Neaten the outer edge of the pocket with a machined zigzag stitch or by overcasting (see fig.5a).

Turn each pocket inside out.

Turn in the seam allowance round the outer edge of each pocket and tack (fig.5b).

Press flat.

On the right side of each pocket, topstitch 6mm (1") in from the top edge (see fig.5b).

Tack the pockets to the cape front in positions indicated on the graph pattern.

Topstitch 6mm (1") in from the outer edge of the pocket and press.

Hem

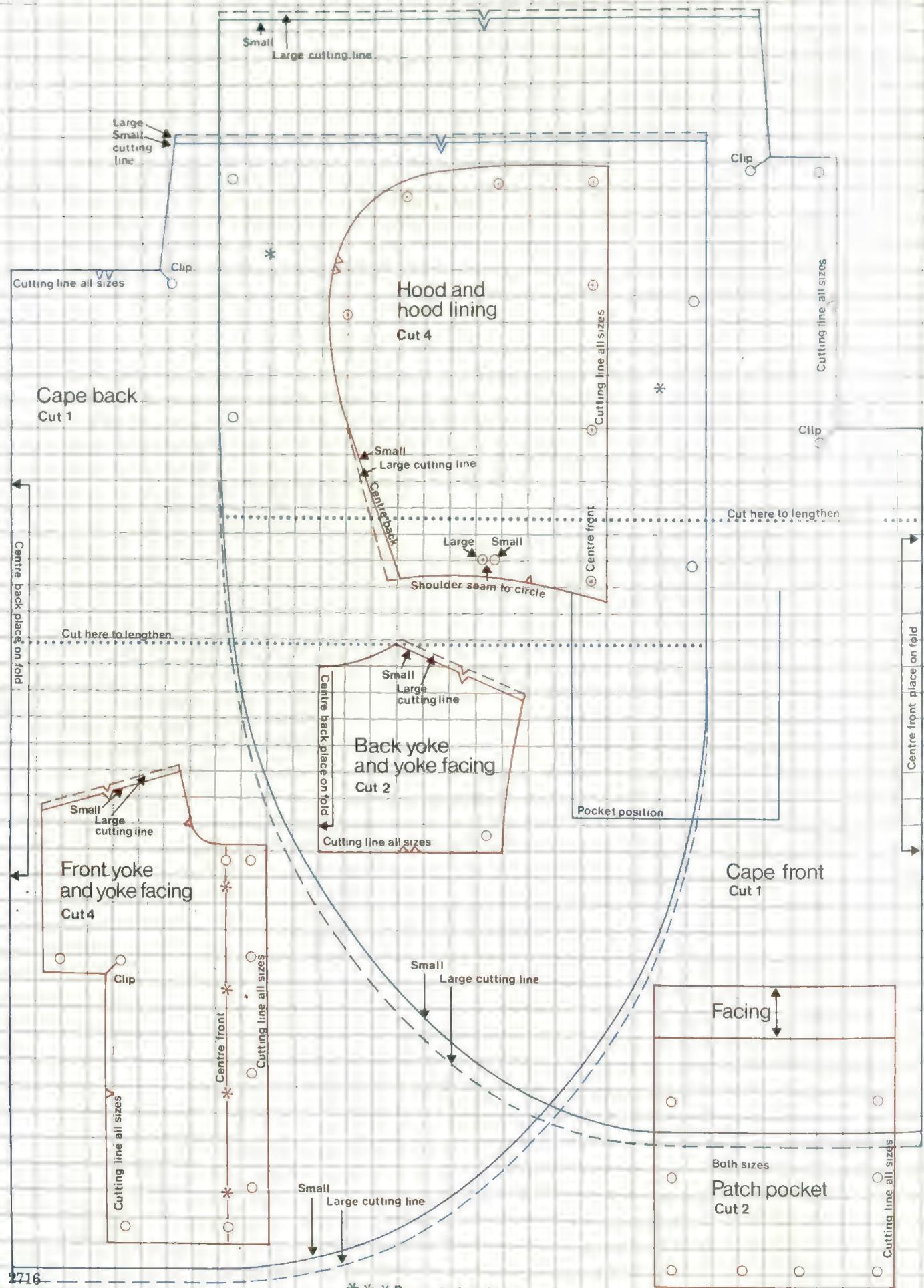
To neaten the side and bottom edges of the cape, turn under 6mm (1") and tack. Turn under a further 9mm (3/8") and tack. Stitch 6mm (1") in from the edge as shown.

Press flat.

Finishing

Attach the press stud fasteners on the front yoke and side edges of the cape in positions indicated on the graph pattern, following the instructions given with press stud fastener kit.

Scale:
1 square = 2.5cm (1") sq



INDEX

How to Use the Index

The index includes both a thematic table of contents and a complete alphabetical index. Every craft, technique, pattern, tool, stitch and material contained in the Encyclopedia of Crafts is listed here, and fully cross-referenced for the special convenience of teachers and librarians.

For example, if both beads and buttons are available, a craft activity would be suggested by looking in the table of contents under *Beadwork: bead embroidery on buttons* or in the index under *Buttons: beaded*. Similarly, lampshades can be found under that heading in the index, as well as in the table of contents under paper, basketry and so forth.

The table of contents lists the subject areas covered in the encyclopedia, and lists every chapter devoted to that subject, with its page number. For additional convenience and quick reference, the subject headings in the table of contents are listed on this page.

The alphabetical index begins on page 2723.

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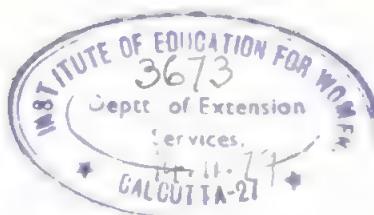


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